Original Research Article

Knowledge on Basic Life Support (BLS): An Evaluative Study

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ABSTRACT

Background: Basic life support is the fundamental technique for the emergency treatment of cardiac arrest. The standardized training of cardiopulmonary resuscitation has been emphasized more than ever. Common people in developed countries have received people education of cardiopulmonary resuscitation and Basic life support training is mandatory for nurses and is important as nurses often first discover the victims of cardiac arrest the victims of cardiac arrest in hospital. Available literature suggests a need for both initial cardiopulmonary resuscitation training and refresher courses. In this contest, the training of students to improve the knowledge and competency in basic life support is having most significance. it is because in future they are the one who is assessing and providing the needed care for the patient at the earlier stage. The aim of the study was to assess the knowledge of selected PU college students regarding Basic Life Support by administrating knowledge questionnaire.

Methods: In this study, one group pre-test and another one post-test design was used to assess the knowledge of PU students on basic life support. In this study samples were selected 40 PU students of Ghokhale centenary college Ankola. Based on the research problem and objectives of the study the following steps were undertaken to select and develop the data collection. A structured knowledge questionnaire in English version is found to be appropriate instrument to elicit responses from the selected participants. The investigators developed planned teaching programme to assess the level of knowledge regarding Basic Life Support among P.U students and it is regulated to be an appropriate instrument. Data were analyzed by using descriptive and inferential statistics.

Results: Among the students All the P.U students 40 (100%) only belongs to age group of 17-20 years. Majority of P.U students 31 (77.5%) were female and minimum of students 9 (22.5%) were males.

Knowledge aspects: The paired 't' test established at 0.05 level of significance revealed that mean post test score of the samples is significantly higher than their mean pre-test knowledge scores which signifies that calculated value is greater than the table value.

Conclusion: The present study was undertaken assess the effectiveness of planned teaching programme on knowledge regarding Basic Life Support and to associate it with the selected demographic variables.

The following conclusion was based on the findings. The results were described by using descriptive and inferential statistics.

❖ The study indicates that majority of samples 40 (100%) belonged to the age group of 17-20 years. Most of the samples 31 (77.5%) were female and 9 (22.5%) were males. All the sample were hindus. The family income of majority of samples 29 (72.5%) was less than 50,000.

❖ Maximum students 26 (65%) did not have any previous knowledge about basic Life Support. The source of information of maximum students were internet 5 (35.71%) and others.

❖ The paired 't' test established at 0.05 level of significance revealed that mean post-test knowledge of the sample is significantly higher than their mean pre-test knowledge which shows that calculated value is greater than the table value. Hence the research hypothesis is accepted indicating that there was significant gain in knowledge regarding Basic Life Support through the planned teaching programme.

❖ The Chi-square established at 0.05 level of no significance denotes the association between the knowledge and demographic variables like age, gender, religion, previous knowledge, source of information, accident witnessed was less than the tabulated value and only the family income was more than the tabulated value, hence the association was not found with the demographic variables.

INTRODUCTION

Basic Life Support is a level of medical care which is used for victims of life threatening illness or injuries until they be given full medical care at a hospital. It can be provided by trained medical personnel, including emergency medical technicians, paramedics and by qualified bystanders. [1]

Basic life support is that particular phase of emergency cardiac care that either (1) prevents circulatory or respiratory arrest or insufficiency trough prompt recognition and intervention or (2) externally supports the circulation and ventilation of victim of cardiac or respiratory arrest trough cardiopulmonary resuscitation [CPR]. [1]

Many countries have guidelines on how to provide BLS which are formulated by professional medical bodies in those countries. It is used for the management of number of conditions such as cardiac arrest, choking and drowning. BLS does not include the use of drugs or invasive skills and can be constructed with the provision of advanced life support. [2]

The American Heart Association (AHA) endorses CAB in order to emphasize the primary importance of chest compressions in cardiopulmonary resuscitation. Healthy people maintain the CAB's by themselves in an emergency situation, due to illness or trauma, BLS helps the patients ensure his or her own CAB's or assists in maintaining for the patient who is unable to do so. [2]

The most important aspects in basic life support are ABC, is nothing but the airway, breathing and circulation. Failure of the circulation of three or four minutes will lead to irreversible cerebral damage. For every minute that passes after a patient goes into cardiac arrest their chance of survival decreases by seven to ten percent until a defibrillator arrives. A patient who has suffered sudden cardiac arrest must receive effective treatment rapidly. When delivered promptly, resuscitation can save the lives of many patients in cardiac arrest. Basic life support acts to slow down the deterioration of the brain and heart until defibrillation and/or advance life support can be provided. Prompt investigations of Basic Life Support can double the patient's chance of survival. [3]

The student performing Basic Life Support for the second time achieved better results than those undertaking practice and testing for the first time. These data and studies figure out the need of repeated teaching and assessment to ensure adequate knowledge and skills gained among the students. The repeated training programme provides students with sound basic knowledge and adequate practical skills in first aid and Basic Life Support that adequacy of time and physical and human resources are important prerequisites to facilitates practice and enhance confidence in skills. [4]

Understanding BLS courses and more than that, practicing these techniques is by far the most challenging task confronting first aid. Either by theoretical classes, practical training or virtual education, we feel that basic life support

techniques must be acquired as soon as possible medical school, because their core meaning is that of saving a life, the main reason why all students choose the medical profession. [5]

Taking everything into consideration, believe that the adequate education on first aid and basic life support should be considered as an essential aspect of the medical universities curriculum. The BLS training might improve both state of mind aspects of the students, their eagerness to learn, their passion for the medical art and their clinical skills. [6]

There is an important number of people who imply people suffering from a lack of an appropriate care in an uncontrolled environment emergency. To begin with the main important advantage of receiving a Basic Life Support (BLS) Training, this training is useful for others. More than that, the course has proven to be beneficial for a wide range of persons including parents who do not want to be let down by forgotten or weak resuscitation skills. [7]

In spite of the fact that this programme is not included in the curricula, students might receive this information from various persons, even through these persons are not specialized in the domain of giving first aid. Therefore, some of the accidents might not acquire the proper accurate information and this may lead to medical errors and a low self confidence because of the low of knowledge acquired. [7]

On the other hand there are associations, which organize these kinds of programme not only for students but also for the medical personnel or for anyone eager to learn about first aid. Who received a BLS training in an organized way; that is why we strongly recommend that BLS should be included in the curricula. [7]

Cardiovascular diseases are the world leading killer. According to world health organization (WHO) estimate, 167million people around the global, die 29% of all deaths globally Cardiovascular diseases now more prevalent in India and china than all economically developing countries in the world. Combined cardiovascular diseases in India quadrupled in the last 40 years. WHO estimate that by 2020close to 60% of cardiac patients worldwide will be Indian. [8]

Basic life support is the fundamental technique for the emergency treatment of cardiac arrest. The standardized training of cardiopulmonary resuscitation has been emphasized more than ever. Common people in developed countries have received people education of cardiopulmonary resuscitation and Basic life support training is mandatory for nurses and is important as nurses often first discover the victims of cardiac arrest the victims of cardiac arrest in hospital. Available literature suggests a need for both initial cardiopulmonary resuscitation training and refresher courses. In this contest, the training of students to improve the knowledge and competency in basic life support is having most significance. it is because in future they are the one who is assessing and providing the needed care for the patient at the earlier stage. [9]

Understanding Basic Life Support (BLS) courses and more than that, practicing these techniques is by far the most challenging task confronting first aid. Either by theoretical classes, practical training or virtual education, we feel that basic life support techniques must be acquired as soon as possible in medical college, schools, because their care meaning is that of saving a life, the main reason why all students choose the medical profession. [9]

Taking everything into consideration, believe that the adequate education on first aid and basic life support should be considered as an essential aspect of the medical universities curriculum. The Basic Life Support (BLS) training might improve both state of mind aspects at the students, their eagerness to learn, their passion for the medical act and also their clinical skills. [10]

Recent study shows that regarding simulation training show that the simulation –based intervention offers a positively evaluated possibility to enhance students' skill in recognizing and handling emergencies. Improving the ability so mange medical emergencies and we must recognize the fact that, in the case at acute medical emergencies, second count, and these may be the seconds needed for a Doctor to arrive reset to the patient that a student's is examining taking a medical history. [10]

MATERIALS AND METHODOLOGY

An evaluating approach was felt to be appropriate for the study under taking, since it was aimed to assess the knowledge regarding basic life support among PU students of Ghokhale Centenary college Ankola. In this study, one group pre-test and another one post-test design was used to assess the knowledge of PU students on basic life support. In this study samples were selected 40 PU students of Ghokhale centenary college Ankola. Purposive sampling technique was adopted to select the subjects.

Development of the tool: The tool used for the data collection was It includes 53 items. The items were multiple choice questions and true or false questions. Demographic performa characterised were age, gender, religion, family income per year, previous knowledge regarding Basic Life Support, mass media information gained or not, accident witnessed.

The investigators developed planned teaching programme to assess the level of knowledge regarding Basic Life Support among P.U students and it is regulated to be an appropriate instrument.

RESULTS

Among the students All the P.U students 40 (100%) only belongs to age group of 17-20 years. Majority of P.U students 31 (77.5%) were female and minimum of students 9 (22.5%) were males. Knowledge aspects: The paired 't' test established at 0.05 level of significance revealed that mean post test score of the samples is significantly higher than their mean pre-test knowledge scores which signifies that calculated value is greater than the table value.

TABLE: 1 Frequency and percentage distribution of pre-test knowledge scores of samples regarding Basic Life Support

SI.NO	LEVEL OF KNOWLEDGE	SCORE RANGE	FREQUENCY	PERCENTAGE
1.	GOOD	41-60	1	2.5%
2.	AVERAGE	21-40	31	77.5%
3.	POOR	0-20	8	20%

TABLE: 2 Frequency and percentage distribution of post-test knowledge scores of samples regarding Basic Life Support

SI.NO	LEVEL OF KNOWLEDGE	SCORE RANGE	FREQUENCY	PERCENTAGE
1.	GOOD	41-60	22	55%
2.	AVERAGE	21-40	18	45%
3.	POOR	0-20	0	0%

Hence the hypothesis is **H₂:** There will be a significant statistical difference between pre-test knowledge scores and post-test knowledge scores on Basic Life Support (BLS) among selected PU college students of College at Ankola was accepted.

TABLE : 3: Mean, Standard deviation, degree of freedom and 't' value of pre-test and post test knowledge scores of samples.

PARAMETERS	MEAN	DIFFERENCE OF MEAN	SED	't' cal	't' table	Df
PRE-TEST	25.9					
POST-TEST	40.975	14.975	0.629	18.765	1.95	3

The data and the table shows that mean post-test knowledge scores of the sample is significantly higher than the mean pre-test knowledge scores that is the 't' table 3 (1.95) and the calculated value 't' =

18.765, p<0.05 which shows that calculated value is greater than the table value.

Hence alternative hypothesis [H₃] There will be a significant gain in knowledge on Basic Life Support (BLS) among selected PU college students at Ankola was accepted.

Frequency and percentage distribution showing the difference between pre-test and post-test knowledge scores of samples regarding Basic Life Support
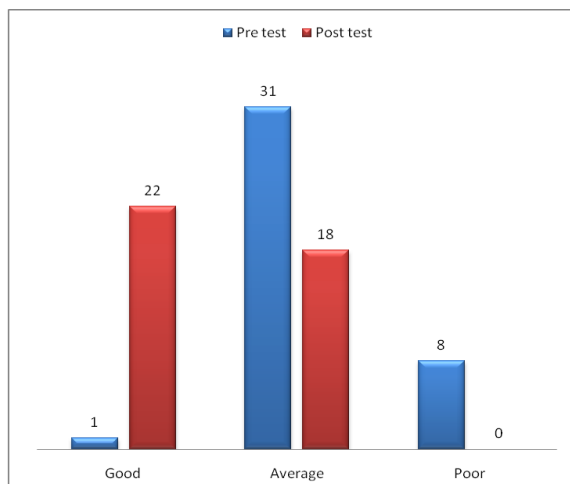

TABLE : 4 Association of pre-test knowledge scores of Basic Life Support with selected demographic variables.

SL NO	DEMOGARPHIC VARIABLES	CHI-SQUARE VALUE	Df	TABLE VALUE	SIGNIFICANCE
1.	Age	0	2	5.99	NS
2.	Gender	0.5433	2	5.99	NS
3.	Religion	0	6	12.59	NS
4.	Family income per year	14.0248	6	12.59	S
5.	Previous knowledge	2.973	2	5.99	NS
6.	Sources of information	1.9382	12	21.03	NS
7.	Accident witnessed	0.17015	2	5.99	NS

H₁: There will be a no significant statistical association between pre-test knowledge scores on Basic Life Support (BLS) with demographic variables of selected PU college students of College at 0.05 level of significance.

The findings of table 4 reveals that the variables, age, gender, religion, previous knowledge, sources of information, accident witnessed are not dependent to each other. The chi- square value is less than the chi-square table value.

The variables only family income per year is depend to each other. Hence the chi-square value is more than chi- square table value

DISCUSSION

The present study was conducted to assess the effectiveness of planned teaching programme on Basic Life support among P.U students of Ghokhale centenary college Ankola. It is pre-experimental in nature the major findings depend on the objectives of the study. The primary purpose of the study was to determine the knowledge of students regarding Basic Life Support and to prepare and administer the planned teaching programme. It also aims to evaluate the effectiveness of planned teaching programme.

The tool used for the study consists of 2 sections:-

SECTION A: Demographic performa.

SECTION B: Structured questionnaire

The major findings of the study are discussed under the following sections:-

SECTION A
DEMOGRAPHIC PERFORMA

1. All the P.U students 40 (100%) only belongs to age group of 17-20 years.
2. Majority of P.U students 31 (77.5%) were female and minimum of students 9 (22.5%) were males.
3. All the P.U students 40(100%) were Hindu.
4. Majority of P.U students 29 (72.5%) had the family income of less than 50,000 per year, 3 (7.5%) had family income of 50,000-1,00,000,, 2 (5%) had family income of 1,00,000-2,00,000,, 6 (15%) had the income of more than 2,00,000.
5. Majority of the students 26 (65%) did not have any previous knowledge about basic life Support, 14 (35%) had the knowledge about the previous knowledge about Basic Life Support.

6. Some of the students 3 (21.42%) had through television, 3 (21.42%) had through news paper, 3 (21.42%) had through magazine, 5 (35.71%) had through internet.
7. Majority of the students 36 (90%) had previously witnessed accident, 4 (10%) of students had not witnessed any accident previously.

SECTION B

SECTION 1: Description of pre-test and post-test knowledge scores. The assessment of pre-test knowledge students regarding Basic Life Support reveals that 2.5% of students had good knowledge, 77.5% had an average knowledge where as remaining 20% has poor knowledge.

SECTION 2: effectiveness of planned teaching programme on knowledge of students. Paired 't' test was established at 0.05% level of significance denotes the effectiveness of planned teaching programme on knowledge of students regarding Basic Life Support.

The statistical analysis demonstrated that an increase in knowledge level of students regarding Basic Life Support was significant with 't' calculated value of 18.765 which greater than 't' tabulated value 1.9s5. So the planned teaching programme was effective in improving the knowledge level among the students regarding Basic Life Support.

SECTION 3: Association between knowledge and demographic variables.
Chi- square established at 0.05 level of no significance denotes the association between the knowledge and demographic variables age, gender, religion, family income, previous knowledge, source of information, accident witnessed. However the calculated value for Age (0), gender (0.5433), religion (0), previous knowledge (2.973), sources of information (1.9382), accident witnessed (0.17015) were less than tabulated values hence there was no significant association found with this demographic variables. But that of family income (14.0248) was greater than the tabulated value so there was an association with these demographic variables.

CONCLUSION

The study concluded that majority students 26 (65%) did not have any previous knowledge about basic Life Support. The source of information of maximum students were internet 5 (35.71%) and others. The assessment of post-test knowledge students regarding Basic Life Support reveals that 55% of students had good knowledge, 45% had an average knowledge where as no poor knowledge. Effectiveness of planned teaching programme on knowledge of students. Paired 't' test was established at 0.05% level of significance denotes the effectiveness of planned teaching programme on knowledge of students regarding Basic Life Support.

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