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BASIC LIFE SUPPORT: KNOWLEDGE AND ATTITUDE OF MEDICAL STUDENTS

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ABSTRACT

Background: Basic life support is defined as medical procedures and skills that can be utilized in case of emergency to save lives .It is a key component of chain of survival, decreases the cardiac arrest, cardiopulmonary resuscitation interval and increases the rate of hospital discharge. CPR is a part of emergency medical care. Timely provision of basic life support saves life. Objective: The Objectives of our study is to: To assess knowledge of students of Allama Iqbal medical college LHR To assess attitude of students of Allama Iqbal medical college LHR Material and Methods: Study Design: It is a cross sectional study Study Setting: Allama Iqbal medical college, Allama Shabir Ahmad Usmani Road LHR Duration: Three months (April-June). Inclusion criteria: All medical students both hostilities and day scholars of Allama Iqbal Medical College from first year MBBS to final year MBBS including both genders. Data Collection and analysis: Informed consent will be taken and got signed from 300 medical students on assurance of confidentiality. The following parameters will be noted through questionnaire of all medical students included in the study; personal and sociodemographic data such as age, sex, class, knowledge, attitude, level of training and previous exposure to basic life support. Results: 243 students (81%) have heard about BLS while 57 students (19%) haven't heard about BLS. (Graph no: 3). 239 students (79.67%) have the idea regarding correct abbreviation of BLS while others have no idea (Graph no: 4). 94.3% students think BLS knowledge is useful for daily life incidents and 20.3% don't think so. 44.3% students have seen BLS done on some patient and 9.6% have not seen . 13.4% students have also performed BLS on some patient and 2.9% have not performed .(Table no: 2) Conclusions: Knowledge about BLS needs to be improved and conferences must be organized to increase awareness about BLS.

KEYWORDS: Basic life support Knowledge and attitude of Medical students.

INTRODUCTION

Basic life support is defined as medical procedures and skills that can be utilized in case of emergency to save lives.[1] It is a key component of chain of survival that decreases the cardiac arrest and increases the survival rate.[2] Cardiopulmonary resuscitation is a part of emergency medical care.[3] Timely provision of BLS saves life. CPR invented in 1960 is simple but effective procedure that allows almost anyone to sustain life in early critical minutes after cardiac and respiratory arrest. In 1966 the American heart association developed the first CPR guidelines which have been followed by regularupdates.[4] Knowledge ofBLS is absolute necessity for medical professionals to face acute medical emergencies.[1] BLS includes recognition of signs of sudden cardiac arrest ,heart attack, CVS stroke, foreign body airway obstruction and automated external defibrillator.[5] BLS procedures include CPR, bleeding control, artificial ventilation and basic airway management.[6] One of the objective at graduation is, to educate about BLS.[8]

According to study given in world journal of emergency medicine, when the participants are inquired about resuscitation training during graduation, 83(69%) of them had no training at all and 27(22%) had received some training within last 5 years. 28(23%) of participants had not been involved in patient resuscitation.[2]

According to another study among medical students at Ziauddin university Karachi, 34(27%) trained and 28(22.4%) untrained students could tell that they have to put a patient with convulsion in recovery position to avoid any aspiration and tongue rolling. 38(30.4%) of both trained and untrained expressed that they would give plenty of water to patient who has accidently ingested acid. Maximum number of correct answer for trained students was 11 and minimum 4 with the mean of 6.13+_2.1 questions.[8]

In Saudi Arabia study was carried out, it was stated that no student had completed 10% knowledge in BLS among responders. Only 2 out of 144 students(1.38%) had secured 70-79%. 10 out of 144 responders (6.94%)

had secured 60-69%. 35 of 144 (24.30%) secured 50-59%. 97 responders (67.36%) had secured less than 50%. The mean score was 39.7% showing overall poor knowledge of medical students about BLS.[6]

In a Study by Harshakumar in India, majority 84.6% of the students had heard of fact that 37.8% felt that CPR should be administered to unconscious person with normal palpable pulses and respiration. And 39.5 % only knew the fact the correct order for performing CPR. Students had adequate overall understanding about the response to a situation where CPR is needed.[3] Health professionals should have sound CPR knowledge and skills but there is major problem with retention of skills and outdated information. Average health personnel in our Centre lack adequate knowledge in CPR which should be addressed promptly. CPR should be a core competency across our health care professional programs.Poor awareness among medical students about basic life support is a matter of great concern. The presence of trained rescuer is key determinant of ultimate lifesaving skills that is to take right decision to foster these skills for medical students which can be reinforced in succeeding years.[9]

MATERIALS AND METHODS

Objectives

The Objectives of our study is to:

- To assess knowledge of students of Allama Iqbal medical college LHR
- To assess attitude of students of Allama Iqbal medical college LHR

OPERATIONAL DEFINITION

Basic life support is defined as knowledge and attitude about basic first aid, cardiopulmonary resuscitation, bleeding control, artificial ventilation, stabilization of injuries or wounds, treatment of shock, poisoning, acidosis and basic airway management.

MATERIAL AND METHODS

Study Design

Cross sectional study

Study Setting

Study was done at Allama Iqbal medical college, Allama Shabir Ahmad Usmani Road LHR.

Duration of Study

Three months

Sample Size

300 students of AIMC LHR

Sampling Technique

Non probability / purposive sampling

Sample Selection

Inclusion criteria

Sample was collected from All medical students both hostilities and day scholars of Allama Iqbal Medical College from first year MBBS to final year MBBS including both genders.

Exclusion criteria

All first year MBBS to final year MBBS students who were debarred

Data Collection Procedure

Informed consent was taken and gotsigned from 300 medical students on assurance of confidentiality. The following parameters was noted through questionnaire of all medical students included in the study ; personal and sociodemographic data such as age, sex, class, knowledge, attitude, level of training and previous exposure to basic life support.

RESULTS AND MAIN FINDINGS

Three hundred students were included in the research. Of them 184 (61.33%) were females and 116 (38.67%) were males. Of the total, 184 (61.33%) were female and 116 (38.67%) were male of different classes (Graph no: 1).

Two hundred & forty three (81%) students have heard about BLS. Out those 129 (76.8%) were from preclinical years, male were 58 (72.5%) and female were 71 (79.8%) and 114 (87.0%) were from clinical years, male were 29 (89.5%) and female were 85 (89.5%). 239 students (98.3%) had the idea regarding correct abbreviation of BLS while others have no idea.

Twenty seven (16) preclinical years students had done BLS on some patients, male were 25 (31.3%) and female were 2 (2.2%) and thirteen (9.9%) clinical years students have done BLS on some patient, male were 8 (22.2%) female were 5 (5.3%).

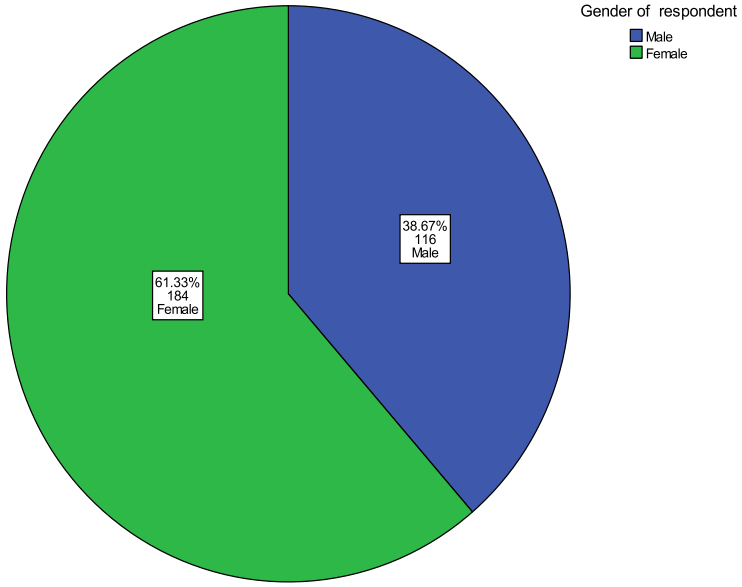
Forty one (24.3%) pre clinical years students had attended workshops on BLS, male were 23 (28.8%) and female were 18(20.2%). Sixteen clinical years students had attend workshops, male were 6 (16.7%) and female were 10 (10.5%).

One hundred & fifty seven (92.9%) pre clinical students thought BLS useful , male were 73 (91.3%) and female were 84 (94.4.%). 0ne hundred & twenty four clinical years students thought BLS useful, male 33 (91.7%) and female 91 (95.8%).

More females (85.2%) had heard and knew about BLS as compared to males (75.7%) while more males among those who had heard about BLS have attended workshops (25.2%) and had performed BLS on various patients (28.7%).

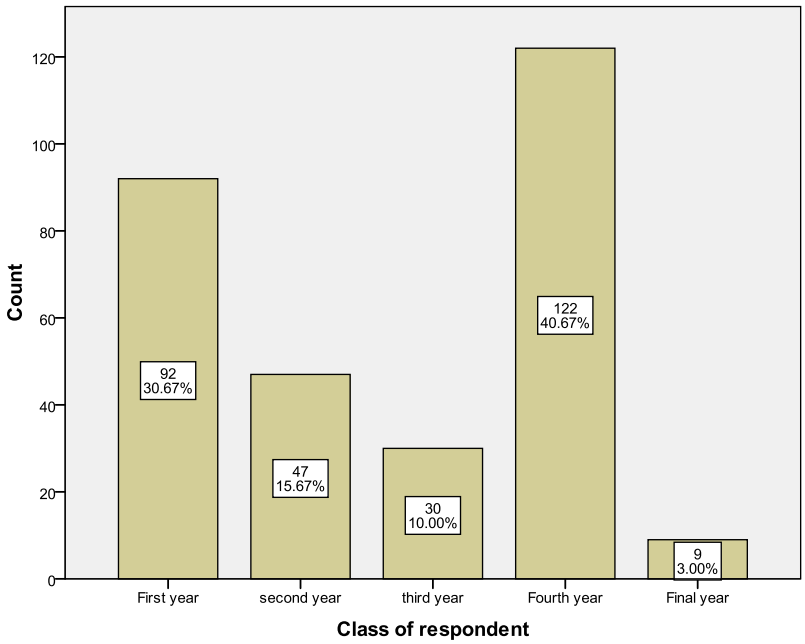
Table 1: Age of respondents.

N	Valid	300
	Missing	0
Mean	20.5700	
Median	21.0000	
Mode	21.00	
Std. Deviation	1.52079	
Minimum	17.00	
Maximum	24.00	



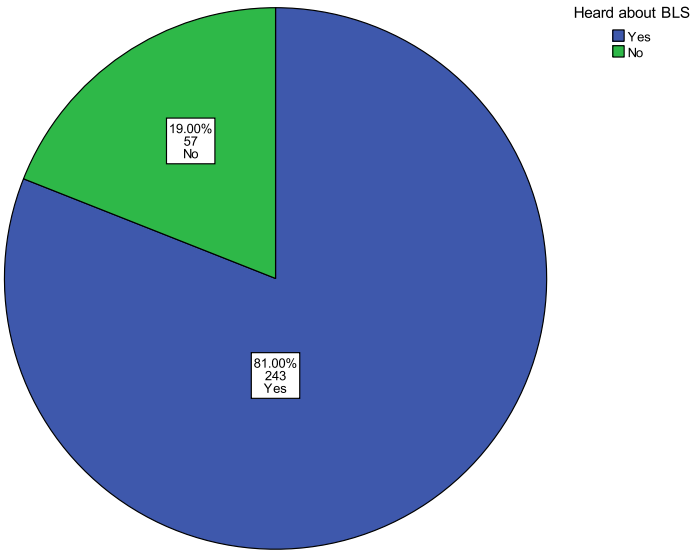
Graph: 1 Gender of respondent.

Female: 61.33%
Male: 38.67%



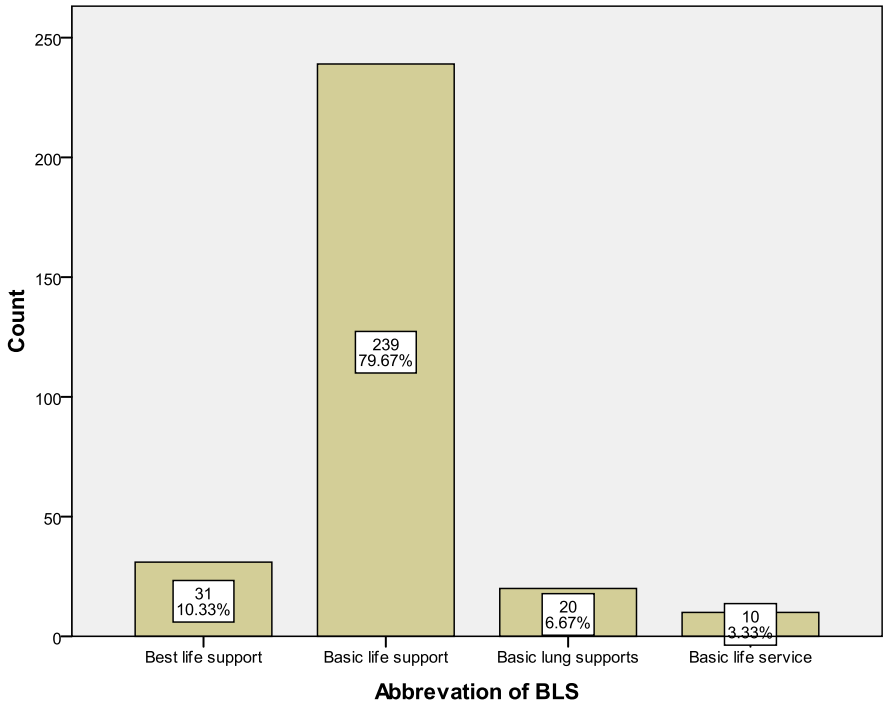
Graph 2: Class of respondent.

First year: 30.67%
Fourth year: 40.67%
Second year: 15.67%
Third year: 10.00%
Final year: 3.00%



Graph 3: Heard about BLS.

Yes: 81.00%
No: 19.00%



Graph 4: Abbrevation of BLS.

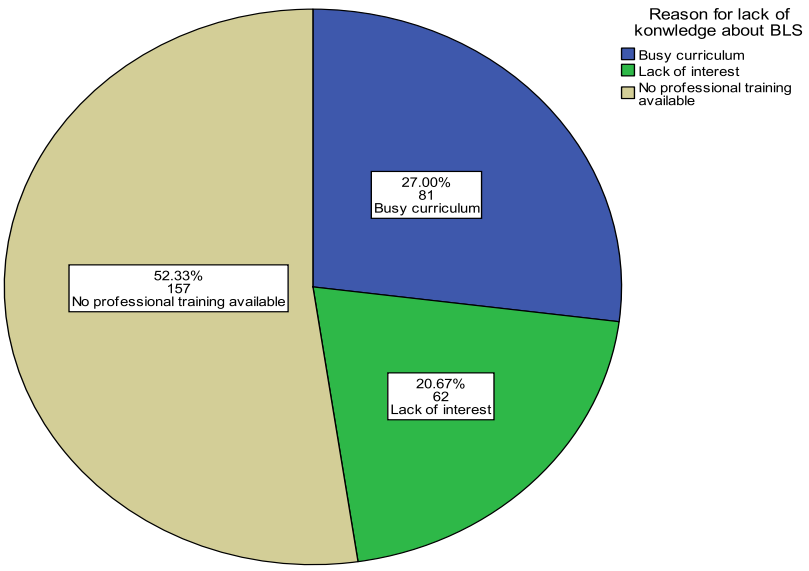
Basic life support: 79.67%
Best life support: 10.33%
Basic lung support: 6.67%
Basic life service: 3.33%

Table: 2 BLS Knowledge Frequencies.

	Responses		Percent of Cases
	N	Percent	
Heard about BLS	243	17.6%	81.5%
Need to know BLS	270	19.5%	90.6%
BLS in medical curriculum	260	18.8%	87.2%
BLS in hospital setting	99	7.2%	33.2%
BLS being done is seen	132	9.6%	44.3%
BLS done on patient	40	2.9%	13.4%
BLS workshop attended	57	4.1%	19.1%
Usefulness of BLS	281	20.3%	94.3%
Total	1382	100.0%	463.8%
a. Dichotomy group tabulated at value 1.			

Table 3: BLS Knowledge*Gender Cross tabulation.

		Gender of respondent		Total
		Male	Female	
Heard about BLS	Count	87	156	243
	% within Gender	75.7%	85.2%	
Need to know BLS	Count	99	171	270
	% within Gender	86.1%	93.4%	
BLS in medical curriculum	Count	94	166	260
	% within Gender	81.7%	90.7%	
BLS in hospital setting	Count	56	43	99
	% within Gender	48.7%	23.5%	
BLS being done is seen	Count	61	71	132
	% within Gender	53.0%	38.8%	
BLS done on patient	Count	33	7	40
	% within Gender	28.7%	3.8%	
BLS workshop attended	Count	29	28	57
	% within Gender	25.2%	15.3%	
Usefulness of BLS	Count	106	175	281
	% within Gender	92.2%	95.6%	
Total	Count	115	183	298
Percentages and totals are based on respondents.				
a. Dichotomy group tabulated at value 1.				



Graph 5: Reason for lack of knowledge about BLS.

No professional training available: 52.33%
Curriculum: 27.00%
Lack of interest: 20.67%

Table 4: Gender of respondent * Heard about BLS * Class of respondent Crosstabulation.

Gender of respondent * Heard about BLS * Class of respondent			Heard about BLS			Total
	Yes	No				
Pre-Clinical (I - III Yrs.)	Gender of respondent	Male		58	22	80
				72.5%	27.5%	100.0%
		Female		71	18	89
				79.8%	20.2%	100.0%
	Total		129	40	169	
			76.3%	23.7%	100.0%	
Clinical (IV & V Yrs.)	Gender of respondent	Male		29	7	36
				80.6%	19.4%	100.0%
		Female		85	10	95
				89.5%	10.5%	100.0%
	Total		114	17	131	
			87.0%	13.0%	100.0%	

Table 5: Gender of respondent * BLS in medical curriculum * Class of respondent Cross tabulation.

Class of respondent				BLS in medical curriculum		Total
				Yes	No	
Preclinical (I - III Yrs.)	Gender of respondent	Male		61	19	80
				76.3%	23.8%	100.0%
		Female		81	8	89
				91.0%	9.0%	100.0%
	Total		142	27	169	
			84.0%	16.0%	100.0%	
Clinical (IV & V Yrs.)	Gender of respondent	Male		33	3	36
				91.7%	8.3%	100.0%
		Female		85	10	95
				89.5%	10.5%	100.0%
	Total		118	13	131	
			90.1%	9.9%	100.0%	

Table 6 Gender of respondent * Need to know BLS * Class of respondent Crosstabulation.

Class of respondent				Need to know BLS		Total
				Yes	No	
Pre-Clinical (I - III Yrs.)	Gender of respondent	Male		65	15	80
				81.3%	18.8%	100.0%
		Female		80	9	89
				89.9%	10.1%	100.0%
	Total		145	24	169	
			85.8%	14.2%	100.0%	
Clinical (IV & V Yrs.)	Gender of respondent	Male		34	2	36
				94.4%	5.6%	100.0%
		Female		91	4	95
				95.8%	4.2%	100.0%
	Total		125	6	131	
			95.4%	4.6%	100.0%	

Table 7: Gender of respondent * BLS in hospital setting * Class of respondent Crosstabulation.

Class of respondent			BLS in hospital setting		Total
			Yes	No	
PreClinical (I - III Yr)	Gender of respondent	Male	43	37	80
			53.8%	46.3%	100.0%
		Female	24	65	89
			27.0%	73.0%	100.0%
	Total	67	102	169	
		39.6%	60.4%	100.0%	
Clinical (IV & V Yr)	Gender of respondent	Male	13	23	36
			36.1%	63.9%	100.0%
		Female	19	76	95
			20.0%	80.0%	100.0%
	Total	32	99	131	
		24.4%	75.6%	100.0%	

Table 8: Gender of respondent * BLS done on patient * Class of respondent Cross tabulation.

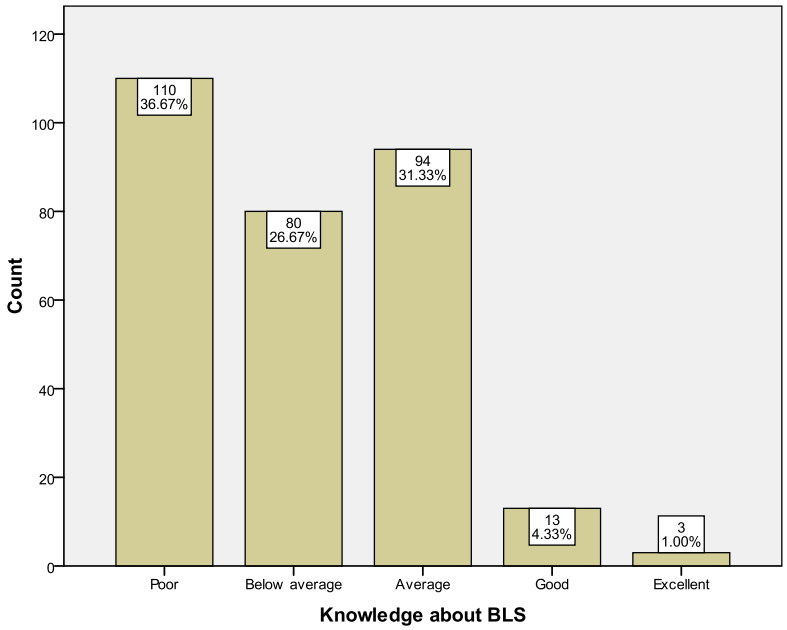
Class of respondent			BLS done on patient		Total
			Yes	No	
PreClinical (I - III Yr)	Gender of respondent	Male	25	55	80
			31.3%	68.8%	100.0%
		Female	2	87	89
			2.2%	97.8%	100.0%
	Total	27	142	169	
		16.0%	84.0%	100.0%	
Clinical (IV & V Yr)	Gender of respondent	Male	8	28	36
			22.2%	77.8%	100.0%
		Female	5	90	95
			5.3%	94.7%	100.0%
	Total	13	118	131	
		9.9%	90.1%	100.0%	

Table 9: Gender of respondent * BLS workshop attended * Class of respondent Crosstabulation.

Class of respondent				BLS workshop attended		Total
				Yes	No	
Preclinical (I - III Yr)	Gender of respondent	Male		23	57	80
				28.8%	71.3%	100.0%
		Female		18	71	89
				20.2%	79.8%	100.0%
	Total		41	128	169	
			24.3%	75.7%	100.0%	
Clinical (IV & V Yr)	Gender of respondent	Male		6	30	36
				16.7%	83.3%	100.0%
		Female		10	85	95
				10.5%	89.5%	100.0%
	Total		16	115	131	
			12.2%	87.8%	100.0%	

Table 10: Gender of respondent * Usefulness of BLS * Class of respondent Crosstabulation.

Class of respondent				Usefulness of BLS		Total
				Yes	No	
Pre Clinical (I - III Yr)	Gender of respondent	Male		73	7	80
				91.3%	8.8%	100.0%
		Female		84	5	89
				94.4%	5.6%	100.0%
	Total		157	12	169	
			92.9%	7.1%	100.0%	
Clinical (IV & V Yr)	Gender of respondent	Male		33	3	36
				91.7%	8.3%	100.0%
		Female		91	4	95
				95.8%	4.2%	100.0%
	Total		124	7	131	
			94.7%	5.3%	100.0%	



Graph 6: Knowledge about BLS.

Poor: 36.67%
Average: 31.33%
Below average: 26.67%
Good: 4.33%
Excellent: 1.00%

DISCUSSON

Medical students should have sound BLS knowledge and skills but there is a major problem in their knowledge and attitude towards BLS. This study was done to explore the present knowledge of medical students of Allama Iqbal Medical College about BLS/CPR so as to make a plan for BLS training. The present study being a unique study analyzed the knowledge, awareness and attitude towards BLS among medical students.

Our study revealed that majority of students (36.67%) had poor knowledge about BLS while 31.33% were in average range and only 1% had excellent knowledge about BLS. Similar results were reported by Pandey S et al and Chandraskar S et al that students had inadequate and poor knowledge about BLS.[9,10]

According to our study, 76.3% students from pre-clinical while 87% from clinical years had knowledge about BLS. A study done by Asad Abbas et al at Zia Uddin University Karachi had similar results that 83.2% trained

and 60% untrained responded correctly about BLS. It revealed the fact that as the students progressed in clinical years they had more knowledge about BLS.[8]

It was found that 27% students had idea that BLS should be done in hospital settings only while other 73% preferred BLS to be done in emergency situation at the spot without waiting for hospital setup. A study by Sharma R and Attar N in Mangalore had the same result that only 13% medical professionals demand proper hospital settings for BLS while 87% of them had idea that BLS can be done both within and outside the hospital setup.[1]

Our study results revealed that only 12.2% had attended BLS workshops and among them males were more active in such activities as compared to female students. Roshana S et al found the similar result that 69% students had no training at all about BLS.[2] Only a few students had actually done BLS on patients which showed their poor attitude towards BLS.

According to 52.33% medical students, the main reason for lack of knowledge about BLS was no professional training available in the College .A study conducted by Afzalimoghaddam M et al in Tehran, Iran had the same finding that BLS training could significantly increase the knowledge of medical students.[11] Majority of the students felt the need to include the BLS training in medical curriculum.

CONCLUSION

The conclusion of our study is

- Awareness and knowledge of Basic Life Support (BLS) among medical students is very poor and needs to be improved.
- Performing BLS and attending BLS workshops plays a vital role in attaining BLS knowledge by medical students.

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