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The effectiveness of a hands-on training programme on basic life support for nursing professionals

Dr Ravindra H. N

Professor, Parul Institute of Nursing, Parul University, Vadodara, Gujarat, India
Corresponding author email: ravindra.n59266@paruluniversity.ac.in

Dr Satish Biradar

Professor, P P Savani School of Nursing, P P Savani University, Surat, Gujarat
Email: sateesh.biradar@ppsuni.ac.in

Mr Siddaram Sarate

Professor, Manikaka Topawala Institute of Nursing, Charotar University of Science and Technology (CHARUSAT), Anand, Gujarat
Email: siddaramsarate.nur@charusat.ac.in

Mrs Ashwini Patil

Associate Professor, P P Savani School of Nursing, P P Savani University, Surat, Gujarat
Email: ashwini.patil@ppsuni.ac.in

Abstract--Background: The diagnosis of abrupt cardiac arrest and activation of the emergency response system, followed by resuscitation and fast defibrillation, is known as Basic Life Support (BLS) (BLS).¹ It's vital to emphasise the necessity of teaching basic life support (BLS) to nursing professionals so that they can be equipped with BLS information and be able to handle critical cases in their clinical setting. Aim: - The aim of this study is to assess is to check effectiveness of the in-service education program on knowledge regarding BLS among the Nursing Professionals. Methods: This is an Experimental research study, the data related to knowledge regarding BLS was collected among 300 Professional Nurses before and after the administration of the Hands-on training program. Results: According to the data, out of 300 nurses tested, 260 (86.66%) had low knowledge, 40 (13.33%) had regular knowledge, and none had a good understanding of BLS. Out of 300 Nurses assessed, only 06 (2%) exhibited poor knowledge, 119 (39.66%) had moderate knowledge, and 175 (58.33%) had strong knowledge. At the 0.05 level of significance, the estimated value t-value of 49.80 was bigger than the tabulated t-

value. So statistically it is proven that the Hands-on Training activity program is effective in increasing the knowledge of Nurses regarding BLS. The socio-demographic variables such as area of work and Years of clinical experience are found to be significant with a pretest knowledge score at 0.05 level of significance. Conclusions: The Hands-on BLS training programme delivered to professional nurses in selected hospitals was shown to be very helpful in boosting the understanding of nursing professionals about BLS, according to this study.

Keywords---basic life support, in-service education, nursing professional.

Introduction

Basic life support (BLS) is an alternative method that entails identifying a cardiac arrest and utilizing proper cardiopulmonary resuscitation (CPR) techniques to keep victims alive until they recover or are moved to a medical facility that can administer advanced life support. It is crucial that all nurses understand basic life support in order to preserve patients' lives. (Phipps, 2003:) ² The art of resuscitating someone who looks to be dead is known as resuscitation. The cornerstone for saving lives after cardiac arrest is basic life support (BLS) (BLS). Recognition of sudden cardiac arrest (SCA) and activation of the emergency response system, early cardiopulmonary resuscitation (CPR), and rapid defibrillation with an Automated External Defibrillator are all key components of BLS (AED)³. The airway, breathing, and circulation are the most critical aspects of BLS. If the circulation quits for three to four minutes, the brain will suffer irreparable damage. Cardiac arrest is a critical acute emergency event that can happen in or out of the hospital and has a high death rate; however, if BLS and cardiopulmonary resuscitation are performed rapidly, the survival rate can be considerably improved. BLS knowledge is a fundamental component of resuscitation success and plays a critical influence on the outcome of acute emergency situations.⁽⁴⁾

At the hospital, nursing professionals are frequently the first to discover a cardiac arrest and ask for help. As a result, nurses must keep current technical knowledge and increase practical abilities in order to contribute more effectively to cardiac arrest maneuvers.⁵ Nurses are deemed to have the fundamental skills and competency required to conduct CPR because they are key members of the healthcare team. CPR has been proved to effectively prevent sudden death when performed in a timely manner, and it is thus regarded as an essential medical operation. Nurses must be aware of the treatment and have experience with it in order to conduct it attentively. ^{6,7}. BLS courses are in high demand all throughout the world. Several articles in recent years have identified deficiencies in CPR quality, both out-of-hospital and in-hospital, which have been addressed in part in the most recent BLS strategies.⁸

Materials & Methods

A Quantitative Study Using This study used a single group pre-test post-test research design. Nursing professionals working in Gujarat's tertiary care facilities were the study's subjects. The nonprobability-purposive sampling approach was employed to choose a total of 300 samples. Each study participant received the pilot-tested questionnaire. The importance of the study was explained to the participants, and their informed consent was obtained. The data was acquired using a self-administered structured questionnaire. Descriptive and inferential statistics were employed to analyze the data. The institutional ethical committee accorded official ethical approval to the study because it involved human beings. The institution's formal authorization was received. Participants supplied their informed consent and were promised anonymity.

Findings

Table 1: Distribution of samples according to pretest & posttest knowledge index regarding BLS

N=300			
Knowledge Score	Poor	Average	Good
Pre Test	260 (86.66%)	40 (13.33%)	0(0%)
Post Test	6 (2%)	119 (39.66%)	175 (58.33%)

Table: 1 reveal that out of 300 samples, 260 (86.66%) of Nurses had poor Knowledge, 40 (13.33%) of Nurses had medium Knowledge and, none of the Nurse had good Knowledge. Whereas in the Post Test, out of 300 samples, only 06 (2 percent) of Nurses displayed poor Knowledge, 119 (39.66 percent) of Nurses obtained average Knowledge, and 175(58.33 percent) of the Nurses got good Knowledge scores.

Table 2:- Comparison of pre-test and post-test knowledge score of Professionals nurses

N=300					
Variable	Test	Mean	Mean Difference	Standard Deviation	t- Value
Knowledge Regarding BLS	Pre Test	8.45	12.06	2.15	49.80
	Post Test	20.51		5.71	

p=0.05 level of significance

Table 2: shows that the overall mean score of knowledge in the pretest was 8.45 while after providing the Hands-on training program regarding BLS the mean Knowledge score was increased up to 20.51. The standard deviation of the pretest was 2.15, after providing the Hands-on training program, the standard deviation was 5.71. The calculated value t-value 49.80 was greater than the tabulated t-value at a 0.05 level of significance. So statistically it is proven that the hands-on training programme effectively increases nurses' knowledge regarding BLS.

Table 3: Association between the knowledge regarding BLS with their selected demographic variables

No.	Variable		Knowledge index			Chi-Square value x2	Inference
			Poor	Average	Good		
1.	Years of clinical experience	< 1 year	177	6	0	18.9	S*
		2-5 years	65	7	0		
		5- 10 years	10	13	0		
		>10 years	8	14	0		
2.	Area of work	Casualty	20	10	0	19.3	S*
		Critical Units	8	25	0		
		General Wards	197	4	0		
		O.T	35	1	0		

The table reveals that the Knowledge score was higher in Nurses working in Critical Areas of the hospital and having more years of clinical experience.

Discussion

Heart disease is the biggest cause of death worldwide, claiming the lives of 17.5 million people each year. An Indian dies of heart disease every 29 seconds. Every day, up to 20,000 new cardiac patients are born. In India, 9 crore individuals have heart disease, and another 30 percent are at high risk. Basic Life Support (BLS) is the provision of treatment to a patient in cardiac arrest in order to preserve proper circulation and ventilation without the use of drugs or specialized equipment.⁹

The findings of the present study suggest that more than half of the samples had low knowledge of BLS. Similar to our findings, a study conducted by Akshatha Rao Aroor, et al. finds that the overall mean level of awareness was only 4.16 ± 1.40 (score range: 0-10). (Score range: 0-10). Regarding 322 (61.9 percent) participants ascribed to lack of awareness regarding BLS to a lack of adequate professional training. About 479 (92.1 percent) agreed that BLS training should be a component of the medical and paramedical curriculum. 10 The current study indicated that post-test knowledge is substantially higher than pre-test knowledge, demonstrating that hands-on BLS training among nursing professionals is effective. These findings resembled those of a study conducted at the P.G. College of Nursing, C.H.R.I, Gwalior (MP) to investigate the knowledge and practice of 60 B.Sc. Nursing second-year students about BLS. Students in the experimental group scored up to 79%. after implementing the planned instruction programmed knowledge, whereas the control group got 60.3% in BLS. According to the findings of the study, the planned training curriculum was helpful in developing knowledge and understanding of practice concerning BLS.¹¹ Our findings are comparable to those of another study was carried out among BSc Nursing students to assess and evaluate the effectiveness of PTP regarding Basic Life Support in the College

of Nursing in Delhi among 30 Nursing Students, which found that the planned teaching program and demonstration on basic life support was effective in enhancing the nursing students' knowledge and skill. (Sharma P, 2016) .

Conflict of Interest

The authors declare that they have no conflicts of interest.

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Conclusion

The present study concluded that the knowledge of Nursing Professionals can be increased by giving them the hands-on training programme periodically. It will help them to keep their knowledge updated and encourage them to improve their knowledge and skill.

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