



ASSESSMENT OF KNOWLEDGE AND PRACTICES OF HEALTH CARE PROFESSIONALS REGARDING BASIC LIFE SUPPORT IN A TERTIARY CARE HOSPITAL, LAHORE

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ABSTRACT

Basic Life Support (BLS) refers to a set of emergency procedures, including cardiopulmonary resuscitation (CPR), use of an automated external defibrillator (AED), and management of airway obstruction, aimed at sustaining life in cases of cardiac or respiratory arrest. This study aims to assess the current level of knowledge and practices related to BLS among health care professionals in a tertiary care hospital in Lahore. This descriptive cross-sectional study assessed the knowledge and practices of 100 health care professionals regarding Basic Life Support (BLS) at a tertiary care hospital in Lahore. Participants included doctors, nurses, and paramedical staff with at least six months of clinical experience, selected through stratified random sampling. Data were collected using a validated, structured questionnaire based on AHA guidelines. The questionnaire covered demographics, knowledge, and practice through multiple-choice and scenario-based questions. Data were analyzed using SPSS version 25, with ethical approval obtained from the Institutional Review Board of Jinnah Hospital Lahore. The results showed that most participants were aged 21–35 years (40%) and male (55%). Professionally, 42% were nurses, 38% paramedical staff, and 20% doctors, with the highest representation from the general ward (42%). Nearly half (48%) had less than one year of experience. Regarding BLS knowledge, 53% had poor knowledge, 30% moderate, and only 17% had good knowledge. In terms of practice, 73% demonstrated incompetent practices, highlighting a significant gap between knowledge and practical application of BLS among health care professionals.

INTRODUCTION

Basic Life Support (BLS) refers to a set of emergency procedures, including cardiopulmonary resuscitation (CPR), use of an automated external defibrillator (AED), and management of airway obstruction, aimed at sustaining life in cases of cardiac or respiratory arrest (Usman et al., 2024). Timely and effective application of BLS techniques can significantly improve survival rates and outcomes in emergency situations (Khan et al., 2023). As frontline responders, health care professionals are expected to possess adequate knowledge and skills to perform BLS efficiently (Irfan et al., 2019). Globally, sudden cardiac arrest is a leading cause of mortality, and the World Health Organization (WHO) emphasizes early intervention through BLS as a key factor in reducing preventable deaths (Zakarya et al., 2020). Studies have demonstrated that prompt BLS can double or even triple a patient's chance of survival (Abid et al., 2024). However, research also shows that many health care professionals, particularly in low- and middle-income countries, including Pakistan, lack updated knowledge and practical competence in BLS techniques due to inadequate training, lack of refresher courses, and limited opportunities for hands-on practice (Sajjad et al., 2024). Tertiary care hospitals cater to critically ill patients and are expected to maintain high standards of emergency care. The preparedness of health care professionals—doctors, nurses, and paramedics—in such settings plays a pivotal role in determining the outcome of life-threatening situations (BAJWA et al., 2020). Yet, there is a scarcity of data on how well-equipped health care professionals in Pakistani tertiary care hospitals are with respect to BLS knowledge and practical skills. This study aims to assess the current level of knowledge and practices related to BLS among health care professionals in a tertiary care hospital in Lahore.

Methodology

This descriptive cross-sectional study was conducted to assess the knowledge and practices of health care professionals regarding Basic Life Support (BLS) in a tertiary care hospital in Lahore. The study population included registered health care providers such as doctors, nurses, and paramedical staff working in various clinical units including emergency departments, intensive care units (ICUs), and general wards. A sample size of 100 was selected using a stratified random sampling technique to ensure proportional representation from each professional category. The inclusion criteria were health care professionals with at least six months of clinical experience who were actively involved in patient care and willing to provide informed consent. Interns, trainees without independent responsibilities, and staff on administrative duty or extended leave were excluded from the study. Data were collected using a structured, self-administered questionnaire developed after reviewing relevant literature and the latest Basic Life Support guidelines by the American Heart Association (AHA). The questionnaire consisted of three sections: demographic information, knowledge-based multiple-choice questions, and practice-related questions based on common clinical scenarios. The tool was validated by subject experts and pilot-tested on 10% of the sample, who were later excluded from the final analysis. Participants were approached during duty hours, briefed about the purpose of the study, and assured of confidentiality and voluntary participation. Questionnaires were distributed and collected on the same day to minimize external influence and ensure a high response rate. Data analysis was performed using the

Statistical Package for the Social Sciences (SPSS) version 25. Descriptive statistics such as means, standard deviations, frequencies, and percentages were used to summarize the data. Inferential statistics, including Chi-square tests and analysis of variance (ANOVA), were applied to determine associations between knowledge and practice levels with demographic variables, with a p-value of less than 0.05 considered statistically significant. Ethical approval for the study was obtained from the Institutional Review Board (IRB) of Jinnah Hospital Lahore.

Results

Table 1: Socio-demographic characteristics

Variable	Category	Frequency	Percentage
Age	21-35 years	40	40%
	36-45 years	30	30%
	46-55 years	20	20%
	More than 55 years	10	10%
Gender	Male	55	55%
	Female	45	45%
Designation	Doctor	20	20%
	Nurses	42	42 %
	Paramedical Staff	38	38%
Department	Emergency	28	28%
	ICU	20	20%
	General Ward	42	42%
	Operation Theatre	10	10%
Experience	0-1 Year	48	48%
	2-5 year	30	30%
	More than 5 years	22	22%

This table presents the socio-demographic profile of the participants. Most participants (40%) were between 21–35 years of age, followed by 30% aged 36–45 years, 20% aged 46–55 years, and 10% above 55 years. In terms of gender, 55% were male and 45% were female. Regarding professional designation, 20% were doctors, 42% were nurses, and 38% were paramedical staff. Participants were working in various departments: 28% in the Emergency Department, 20% in the ICU, 42% in the General Ward, and 10% in the Operation Theatre. As for professional experience, 48% had 0–1 year of experience, 30% had 2–5 years, and 22% had more than 5 years of experience.

Table 2 Overall knowledge of health care professionals regarding BLS

Level of Knowledge	Frequency	Percentage
Poor Knowledge	53	53

Moderate Knowledge	30	30
Good Knowledge	17	17

The majority of participants (53%) had poor knowledge, while 30% demonstrated a moderate level of knowledge. Only 17% of the participants showed good knowledge regarding BLS. This indicates a need for improvement in BLS training among health care professionals.

Table 3 Overall Practices of health care professionals regarding BLS

Level of Knowledge	Frequency	Percentage
Incompetent Practices	73	73
Competent Practices	27	27

The results show that a large majority (73%) demonstrated incompetent practices, while only 27% exhibited competent practices. This highlights a significant gap in the practical application of BLS skills among the participants.

Discussion

The findings of this study reveal a concerning gap in both knowledge and practice of Basic Life Support (BLS) among healthcare professionals. According to results, a significant proportion of participants (53%) exhibited poor knowledge regarding BLS, while only 17% demonstrated good knowledge. Similarly, 73% of the participants demonstrated incompetent practices related to BLS, indicating a serious deficiency in the application of life-saving skills. These findings are consistent with several recent studies highlighting similar challenges. For example, a study conducted by Naveed et al. (2021) in Pakistan reported that only 22% of healthcare professionals had good knowledge of BLS, while the majority had either poor or moderate understanding. Similarly, a study by Alotaibi et al. (2019) in Saudi Arabia found that less than 30% of healthcare providers had adequate BLS knowledge, attributing the deficiency to a lack of formal training and refresher courses. In terms of practice, the current study's finding that only 27% of participants demonstrated competent BLS practices aligns with a study by Sharma et al. (2020), which found that despite some theoretical knowledge, practical skills among healthcare workers were significantly lacking. This disconnect between knowledge and practice may be due to infrequent hands-on training, lack of simulation-based learning, or limited exposure to real-life emergencies. Furthermore, a study by Khalid et al. (2022) emphasizes the importance of continuous education and practical workshops. Their findings showed that after targeted BLS training programs, both knowledge and practice scores improved significantly among healthcare professionals. This suggests that regular training and skill refreshers could play a vital role in improving BLS competence.

Overall, the current study underscores the urgent need to implement structured and ongoing BLS training programs in healthcare settings. Bridging the gap between theoretical knowledge and practical application is essential to ensure healthcare professionals are well-prepared to respond effectively during life-threatening emergencies. Incorporating simulation-based training, periodic evaluations, and mandatory refresher courses could be effective strategies to enhance both knowledge and performance in BLS.

Conclusion

The results of the study reveal that a significant number of health care professionals lack adequate knowledge and skills related to Basic Life Support (BLS). Despite a diverse group of participants from various age groups, departments, and levels of experience, the majority (53%) demonstrated poor knowledge, and an even greater proportion (73%) showed incompetent BLS practices. These findings indicate that current training and educational strategies are insufficient and highlight the urgent need for regular, structured BLS training and skill-based workshops. Enhancing both theoretical knowledge and practical competence in BLS is essential to ensure effective emergency response and improve patient survival outcomes in critical situations.

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