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KNOWLEDGE AND PRACTICE REGARDING PEDIATRIC BASIC LIFE SUPPORT (PBLS) AMONG B.SC. NURSING STUDENTS IN RAJASTHAN: AN INSTITUTIONAL STUDY

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ABSTRACT

Background : Pediatric Basic Life Support (PBLS) is a critical life-saving skill required for effective management of pediatric emergencies. However, knowledge and practical competency among nursing students often remain inadequate. This study aimed to assess the knowledge and practice regarding PBLS among B.Sc. Nursing students at Krishna College of Nursing, Chimanpura, Pali, Rajasthan. **Method:** A descriptive cross-sectional design was adopted. A total of 100 B.Sc. Nursing students were selected through a convenient sampling technique. Data were collected using a structured questionnaire and an observational checklist, and analyzed using descriptive and inferential statistics, including frequency, percentage, mean, and chi-square tests. **Results:** The findings revealed that 22% of students had an average level of knowledge, 56% had good knowledge, and 22% had poor knowledge regarding PBLS. Most participants (61%) had Adequate **practice skills**, whereas 21% showed inadequate practice. Only 18% demonstrated fully Moderate PBLS performance. A significant association was found between knowledge and both year of study ($p = 0.02$) and previous PBLS training ($p = 0.001$). **Conclusion:** The study concluded that nursing students possess average knowledge but limited practice in PBLS. Regular simulation-based training and refresher programs are recommended to enhance their clinical competence in pediatric emergency care.

KEYWORDS: Pediatric Basic Life Support, Knowledge, Practice, Nursing Students, Simulation Training, Rajasthan.

INTRODUCTION

Pediatric Basic Life Support (PBLS) is a critical emergency care skill that every healthcare provider, especially nurses, must possess to ensure the survival of children experiencing cardiac or respiratory arrest. Early and effective PBLS intervention significantly increases survival rates and reduces complications in pediatric emergencies.[1] Despite its importance, multiple studies have shown that nursing students often demonstrate inadequate knowledge and poor hands-on practice regarding PBLS, highlighting the urgent need for regular training and assessment.[2]

A study conducted among university students in Egypt found that PBLS knowledge and practice levels significantly improved after web-based and video-assisted training programs, indicating that structured education can enhance students' competencies.[3] Similarly, simulation-based training programs have been shown to produce statistically significant gains in knowledge and skill levels among nursing students, proving that hands-on simulation is one of the most effective learning tools for life-saving techniques.[4]

In India, studies assessing nursing students' knowledge and practice regarding BLS and PBLS have reported average or below-average competency levels,

emphasizing the gap between theoretical learning and practical skill application. For example, in Bikaner, Rajasthan, a study revealed that prior to structured teaching, nursing students exhibited poor PBLS knowledge and skills, which significantly improved after targeted instructional programs.[5] Another similar study from Jodhpur found that 61.5% of nursing students had only average knowledge about BLS, underlining the necessity of simulation and role-play-based reinforcement.[6]

Therefore, continuous reinforcement of PBLS through simulation, workshops, and skill-based learning modules during undergraduate nursing education is vital to bridge the knowledge-practice gap. Assessing nursing students' knowledge and practice regarding PBLS helps identify educational needs and informs the development of more effective training strategies. The present study, conducted among B.Sc. Nursing students of Krishna College of Nursing, Chimanpura, Pali, Rajasthan, aims to evaluate their knowledge and practice regarding Pediatric Basic Life Support and to explore associations with demographic variables.

MATERIALS AND METHODS

Research Design A **descriptive cross-sectional design** was used to assess the knowledge and practice regarding Pediatric Basic Life Support (PBLS) among B.Sc. Nursing students.

Research Setting: The study was conducted at **Krishna College of Nursing**, Chimanpura, Pali, Rajasthan. The college offers B.Sc. Nursing programs and has well-equipped laboratories for nursing skill training.

Sample and Sample Size : A total of **100 B.Sc. Nursing students** were selected as the study sample. The sample included students from **both batches** of the B.Sc. Nursing program.

Sampling Technique

A **non-probability convenient sampling** technique was used to select the participants who were available during the data collection period and met the inclusion criteria.

Inclusion Criteria

- B.Sc. Nursing students studying at Krishna College of Nursing, Chimanpura.
- Students willing to participate in the study.
- Students present at the time of data collection.

Exclusion Criteria

- Students who were absent during data collection.
- Students who had previously attended a certified PBLS training workshop outside the college curriculum.

Data Collection Tool

The data were collected using a **structured questionnaire and observation checklist**, which consisted of three parts:

- **Section A: Demographic Data:-** Includes variables such as age, gender, year of study, previous exposure to CPR training, and source of PBLS knowledge.
- **Section B: Knowledge Questionnaire:** Contains multiple-choice questions to assess the level of theoretical knowledge about PBLS.
- Each correct response carries one mark.
- **Section C: Practice Checklist :-** An observational checklist used to assess students' practical skills in performing PBLS steps on a mannequin.

Data Analysis

Collected data were organized, coded, and entered into Microsoft Excel and analyzed using descriptive and inferential statistics.

- **Descriptive statistics** such as frequency, percentage, mean, and standard deviation were used to summarize demographic data, knowledge, and practice scores.
- **Inferential statistics** such as chi-square tests were applied to find associations between knowledge levels and selected demographic variables.

RESULTS

Section I: Demographic Profile of Respondents (n = 100)

Demographic Variable	Category	Frequency (f)	Percentage (%)
Age (in years)	18–20	37	37%
	21–23	48	48%
	24 and above	15	15%
Gender	Male	23	23%
	Female	77	77%
Year of Study	1st Year	24	24%
	2nd Year	26	26%
	3rd Year	28	28%
	4th Year	22	22%
Previous PBLS/CPR Training	Yes	28	28%
	No	72	72%
Source of Information	Classroom teaching	46	46%

	Internet/Media	21	21%
	Workshop	18	18%
	Peer discussion	15	15%

Interpretation

Most respondents (48%) were between 21–23 years old, and 77% were female. Only 28% had received prior PBLS or CPR training, with classroom teaching (46%) being the primary source of PBLS information.

Section II: Level of Knowledge Regarding PBLS (n = 100)

Knowledge Level	Score Range	Frequency (f)	Percentage (%)
Good (76–100%)	19–25	56	56%
Average (51–75%)	13–18	22	22%
Poor (≤50%)	0–12	22	22%

Interpretation

A majority (56%) of students showed **good knowledge**, while only 22% demonstrated **average knowledge** and an equal 22% had **poor knowledge** of PBLS. This indicates that while students possess moderate theoretical understanding, a notable proportion lacks adequate awareness.

Section III: Level of Practice Regarding PBLS (n = 100)

Practice Level	Score Range	Frequency (f)	Percentage (%)
Adequate Practice (76–100%)	19–25	61	61%
Moderate Practice (51–75%)	13–18	18	18%
Inadequate Practice (≤50%)	0–12	21	21%

Interpretation

Most participants (61%) had Adequate **practice skills**, whereas 21% showed inadequate practice. Only 18% demonstrated fully Moderate PBLS performance. This reveals a practical skill gap compared to knowledge levels.

Section IV: Association Between Knowledge and Selected Demographic Variables (n = 100)

Demographic Variable	Chi-Square (χ^2)	df	p-value	Significance
Age	3.97	2	0.14	Not Significant
Gender	1.82	1	0.17	Not Significant
Year of Study	9.63	3	0.02	**Significant**
Previous PBLS Training	11.24	1	0.001	**Significant**
Source of Information	4.71	3	0.19	Not Significant

Interpretation

A **statistically significant relationship** was found between knowledge and **year of study** (p=0.02) as well as **previous PBLS training** (p=0.001), suggesting that both academic progression and prior exposure to PBLS training influence knowledge levels.

DISCUSSION

In the present study, the majority of B.Sc. Nursing students (56%) had an **average level of knowledge** regarding Pediatric Basic Life Support (PBLS), 22% had good knowledge, and 22% had poor knowledge. These results suggest that while students are aware of PBLS principles, their theoretical understanding remains moderate. Similar findings were reported by **Anshul Kumar Mangal, Ghanshyam Jangid, and Jaishree Vaishnav (2023)**, who found that nursing students in Bikaner had poor baseline knowledge of PBLS that improved significantly after a structured teaching programme.[7] Likewise, **Arpita Innocent (2022)** found that 61.5% of nursing students in Jodhpur had average knowledge regarding basic life support.[8] International studies also support these findings — **H.F. El-Sayed et al. (2023)** observed significant improvement in university students' PBLS knowledge after online training in Egypt[9], **S. Kose et al. (2019)** in Turkey demonstrated that theoretical PBLS knowledge increased markedly after training[10], and **Abedallah Kasem and Sawsan Abuhammad (2022)** found similar outcomes in Jordan with simulation-based PBLS education.[11] Thus, the current study aligns with previous research indicating that nursing students generally have moderate PBLS knowledge and benefit significantly from structured teaching interventions.

In this study, 61% of the respondents demonstrated **moderate practice skills**, 21% had inadequate practice, and only 18% had adequate practice regarding PBLS. These findings reveal a noticeable gap between theoretical knowledge and practical application. A study by **A. Prasad and Marykutty Mathew (2023)** found that simulation-based PBLS training significantly improved both knowledge and skill among nursing students in Kottayam, Kerala.[12] Similarly, **Ho J, Bidwal**

MK, Lopes IC, Shah BM and Ip EJ. **(2014)** in Egypt reported that after training, 80% of students had satisfactory PBLS practice compared to only 30.9% pre-training.[13] **Omar Nisar et al. (2020)** found that nursing students in Pakistan had fair knowledge but poor PBLS practice, emphasizing the need for frequent skill-based sessions.[14] These supporting studies are in line with the current findings and collectively highlight that **simulation-based, repeated, and hands-on training** is essential to bridge the knowledge–practice gap among nursing students.

The current study found a **significant association** between PBLS knowledge and both **year of study (p = 0.02)** and **previous PBLS training (p = 0.001)**, showing that academic progression and prior exposure strongly influence competency. This is supported by **Borovnik Lesjak V, Šorgo A, Strnad M (2022)**who found that demographic factors like training experience were significantly associated with post-test knowledge.[15] **A. Prasad and Marykutty Mathew (2023)** also reported that previous PBLS exposure positively correlated with students' performance.[16] Additionally, an international study by **K. Kwiecień-Jaguś et al. (2020)** demonstrated that participation in first-aid and resuscitation courses significantly improved BLS knowledge among nursing students in Poland, Lithuania, and Spain.[17] These findings confirm that repeated exposure and higher educational levels are critical in developing and sustaining PBLS competence among nursing students, supporting the outcomes of the present study.

The present study concluded that the majority of B.Sc. Nursing students at Krishna College of Nursing, Chimanpura, Pali, Rajasthan, had **average knowledge and moderate practice** regarding Pediatric Basic Life Support (PBLS), indicating a gap between theoretical understanding and practical competency. A significant association was found between knowledge level and both **year of study** and **previous PBLS training**, highlighting that continued exposure and experience improve competency. The findings emphasize the urgent need to integrate **regular PBLS and CPR training sessions**, **simulation-based workshops**, and **skill evaluation modules** into the undergraduate nursing curriculum. Continuous reinforcement, refresher courses, and practical demonstrations using mannequins should be mandated to enhance students' confidence and competence in managing pediatric emergencies effectively.

REFERENCES

1. Berg MD, Schexnayder SM, Chameides L, Terry M, Donoghue A, Hickey RW, et al. Part 13: Pediatric Basic Life Support. Circulation, 2010 Nov 2; 122(18 0 3): S862–75.
2. Bolado GN, Atinafu Ataro B, Ersino Kebamo T, Shibabaw Ayana A, Mimani Minuta W. Nurse educators' challenges of problem-based learning implementation at Ethiopian public universities: A phenomenological qualitative study. PLoS One, 2025 June 17; 20(6): e0325976.
3. Elzawawy EM, Elsayed HRH, Mady MM, Rizk MH, Almuktar SR, Al-hajjar AK, et al. Perceived effectiveness and preferences of medical students toward blended learning in anatomy: a multi-institutional cross-sectional study. BMC Med Educ, 2025 Dec 6; 25: 1688.
4. Altinbas BC, Çalık KY, Erdöl EK, Kırkbir İB, Güner SG, Tezel M, et al. The effect of simulation-based laboratory training on undergraduate nursing students' clinical skill, satisfaction, and self-confidence. BMC Nurs, 2025 Oct 23; 24: 1322.
5. Kose S, Akin S, Mendi O, Goktas S. The effectiveness of basic life support training on nursing students' knowledge and basic life support practices: a non-randomized quasi-experimental study. Afr Health Sci, 2019 June; 19(2): 2252–62.
6. Bdiri Gabbouj S, Zedini C, Naija W. Effect of Simulation-Based Education of Adult BLS-CPR on Nursing Students' Skills and Knowledge Acquisition. Adv Med Educ Pract, 2025 Apr 22; 16: 663–73.
7. Mangal AK, Jangid G, Vaishnav J. A study to assess effectiveness of structured teaching programme regarding knowledge skills about the basic life support in Pediatric emergency among B.Sc. (N) III-Year students of Govt. / Private Nursing College at Bikaner. Int J Res Paediatric Nurs, 2023; 5(1): 85–9.
8. Innocent A. A STUDY TO ASSESS THE KNOWLEDGE REGARDING BASIC LIFE SUPPORT AMONG STUDENTS AT NURSING COLLEGES OF JODHPUR. EPRA International Journal of Research & Development (IJRD), 2022 May 31; 7(5): 1–1.
9. El-Sayed HF, Abd AM, Halim E, Mohamed YG. Assessment of Knowledge and Practices of University Students of Pediatrics Basic Life Support. The Egyptian Journal of Hospital Medicine [Internet], 2023 [cited 2026 Jan 8]; Available from: https: //consensus.app/papers/assessment-of-knowledge-and-practices-of-university-el-sayed-abd/b02fb1a1dfab53d6ae93722b4651778d/
10. Kose S, Akin S, Mendi O, Goktas S. The effectiveness of basic life support training on nursing students' knowledge and basic life support practices: a non-randomized quasi-experimental study. African Health Sciences, 2019 Aug 21; 19(2): 2252–62.
11. Kasem A, Abuhammad S. Pediatric Basic Life Support among Nursing Students in Jordan: Stimulation-Based Education. [cited 2026 Jan 8]; Available from: https: //opennursingjournal.com/VOLUME/16/ELOCATOR/e187443462208110/
12. Prasad A, Mathew M. Effectiveness of simulation based training programme regarding paediatric basic life support on knowledge and skill of nursing students. Int J Res Paediatric Nurs, 2023; 5(1): 51–3.

13. Ho J, Bidwal MK, Lopes IC, Shah BM, Ip EJ. Implementation of an accelerated physical examination course in a doctor of pharmacy program. Am J Pharm Educ, 2014 Dec 15; 78(10): 182.
14. Nisar O, Ahmad S, Tariq R, Waheed S, Arif M, Nisar S. Assessment and Comparison of Knowledge, Attitude and Practices of Undergraduate Medical and Nursing Students Regarding Training of Basic Life Support. Annals of Jinnah Sindh Medical University, 2020 Dec 31; 6(2): 60–5.
15. Borovnik Lesjak V, Šorgo A, Strnad M. Retention of Knowledge and Skills After a Basic Life Support Course for Schoolchildren: A Prospective Study. Inquiry, 2022; 59: 469580221098755.
16. Prasad A, Mathew M. Effectiveness of simulation based training programme regarding paediatric basic life support on knowledge and skill of nursing students. Int J Res Paediatric Nurs, 2023; 5(1): 51–3.
17. Kwiecień-Jaguś K, Mędrzycka-Dąbrowska W, Galdikienė N, Clavero GV, Kopeć M, Kwiecień-Jaguś K, et al. A Cross-International Study to Evaluate Knowledge and Attitudes Related to Basic Life Support among Undergraduate Nursing Students—A Questionnaire Study. International Journal of Environmental Research and Public Health [Internet], 2020 June 9 [cited 2026 Jan 8]; 17(11). Available from: https: //www.mdpi.com/1660-4601/17/11/4116