

THE EFFECT OF BASIC LIFE SUPPORT (BLS) TRAINING ON IMPROVING KNOWLEDGE AND SKILLS OF NURSES AT MAYAPADA HOSPITAL BANDUNG

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ABSTRACT

Background: Heart disease is one of the leading causes of death worldwide. Nurses must master Basic Life Support (BLS) skills to handle cardiac arrest quickly and accurately. Preliminary studies at Mayapada Hospital Bandung revealed that nurses' knowledge and skills related to BLS were still inadequate. **Purpose:** This study aimed to determine the effect of BLS training on improving nurses' knowledge and skills. **Methods:** A quantitative pre-experimental study with a one-group pre-post test design was conducted on 108 nurses. Instruments included a validated knowledge questionnaire ($r < 0.05$; $\alpha = 0.785$) and an observation sheet based on American Heart Association (AHA) 2020 guidelines. Data were analyzed using Chi-Square and Paired Sample T-Test. **Results:** The average knowledge score increased from 64.07 before training to 94.06 after training ($p = 0.000$). Skill scores increased from 27.78 to 100.00 ($p = 0.000$). **Conclusion:** BLS training effectively improves nurses' knowledge and skills. Regular training and continuous evaluation are needed to maintain preparedness for cardiovascular emergencies.

Keywords: Basic Life Support; training; knowledge; skills; nurses

Introduction

Heart disease has been the leading cause of death worldwide for the past two decades. The American Heart Association (2020) reported that around 350,000 people die annually from out-of-hospital cardiac arrest. Basic Life Support (BLS) is a crucial skill for nurses to provide immediate resuscitation measures. This study was conducted to assess the effectiveness of BLS training in improving the knowledge and skills of nurses at Mayapada Hospital Bandung.

Methods

Design: Quantitative pre-experimental one-group pre-test and post-test design.

Setting and Samples: Conducted at Mayapada Hospital Bandung with 108 nurse participants selected using total sampling.

Instruments: Validated knowledge questionnaire ($\alpha=0.785$) and BLS skill observation sheet (AHA 2020 guidelines).

Data Analysis: Chi-Square and Paired Sample T-Test were used to analyze pre- and post- training data.

Ethical Consideration: Research approval was obtained from the hospital's ethics committee, and informed consent was secured from participants.

Results And Discussion

The study revealed significant improvements in both knowledge and skills among nurses after attending the BLS training. Knowledge scores increased from 64.07 to 94.06, and skill scores improved from 27.78 to 100.00. The Chi-Square test indicated a significant relationship between knowledge level and skill competency ($p<0.05$). These findings align with Bhivate & Bhivate (2022) and Laco & Stuart (2022), showing that repeated simulation-based training enhances BLS performance. Therefore, continuous training programs are necessary to ensure nurses maintain their readiness to respond to cardiac emergencies.

Conclusion

BLS training effectively increases nurses' knowledge and skills in performing cardiac emergency procedures. Regular and structured training, accompanied by evaluation, is essential to maintain competency and compliance with international standards.

References

- American Heart Association. (2020). Guidelines for cardiopulmonary resuscitation and emergency cardiovascular care. Dallas: AHA.
- Bhivate, V.R., & Bhivate, M.R. (2022). Impact of Basic Life Support Training on Knowledge and Attitudes of Healthcare Persons toward Resuscitation. *Journal of Clinical and Diagnostic Research*, 14(4), 634–638.
- Laco, R. B., & Stuart, W. P. (2022). Simulation-based training program to improve cardiopulmonary resuscitation skills. *Military Medicine*, 187(5–6), e764–e772.
- Riatmoko, A., Estri, A. K., & Mulyanto, V. A. (2023). Tingkat pengetahuan perawat dengan keterampilan melakukan simulasi bantuan hidup dasar. *Cendekia Medika*, 8(1), 17–26.
- Kementerian Kesehatan RI. (2024). Profil kesehatan Indonesia. Jakarta: Kemenkes RI.