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The Effectiveness of E-Learning in Enhancing Students' Cardiopulmonary Resuscitation (CPR) Skills Prior To Clinical Practice: A Literature Review

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ABSTRACT

Background: Cardiopulmonary resuscitation (CPR) is a critical life-saving skill that must be mastered by healthcare students before entering clinical practice. The integration of e-learning as a method of CPR training has been increasingly utilized to improve theoretical knowledge and psychomotor readiness prior to clinical exposure.
Purpose: This literature review aims to analyze the effectiveness of e-learning interventions in improving students' knowledge, confidence, and practical skills in performing CPR before hospital clinical placement.
Methods: This literature review followed the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines. Articles were searched from several databases, including PubMed, ScienceDirect, Scopus and Google Scholar, using keywords such as *"e-learning," "CPR training," "students,"* and *"clinical practice."* Inclusion criteria covered studies published within the last ten years, focusing on e-learning or blended learning models for CPR training among health science students.
Results: The reviewed studies indicate that e-learning significantly improves students' cognitive understanding and self-efficacy in CPR performance. However, practical skill retention tends to be higher when e-learning is combined with hands-on or simulation-based training. The flexibility and accessibility of e-learning platforms also enhance student engagement and learning motivation.
Conclusion: E-learning is an effective educational strategy for developing CPR-related knowledge and readiness among students before clinical practice. Nevertheless, optimal skill acquisition requires the integration of e-learning with direct practical sessions. Future research should explore hybrid training models and long-term retention outcomes.

Keywords: *Blended Learning; Cardiopulmonary Resuscitation; Clinical Practice; E-learning; Nursing Education*