JCNSP
https://journal.stikespemkabjombang.ac.id
Journal of Clinical Nursing Studies and Practice
Volume 01 Number 02
May 2025
e-issn: xxxx-xxxx

THE IMPACT OF WITNESSING CARDIOPULMONARY RESUSCITATION ON NURSING STUDENTS: A REVIEW

Ratna Puji Priyanti[1], Iswanto [1], Siriluk Winitchayothin[2], Asri[3], Nurul Hidayah[1]

1. STIKES Pemkab Jombang, Indonesia
2. Mahidol University, Thailand
3. Faculty of Health Science, Muhammadiyah Surabaya University, Indonesia

Submitted:
1 May 2025
Accepted:
27 May 2025

Cresponding Author:
Iswanto
Stikes Pemkab Jombang
Jl. Padan wangi area sawah, Kecamatan Diwek, Kabupaten Jombang, Indonesia

Email:
iswanto.karso.1981@gmail.com

ABSTRACT

This review analyses the psychological effects of observing cardiopulmonary resuscitation (CPR) on nursing students, highlighting a significant disparity between technical training and emotional readiness within nursing education. Despite thorough procedural guidance, students often encounter anxiety, helplessness, and trauma during resuscitation events, especially in cases with unfavourable outcomes or the presence of distressed family members. Such experiences can elicit somatic symptoms, feelings of guilt, and enduring professional self-doubt. Challenges encompass gaps in knowledge regarding current CPR protocols, difficulties in interprofessional communication, and personal trauma histories that may exacerbate psychological distress. The result showed there are 3 themes: Psychological and emotional Impact; CPR performance and clinical competence; Students-teachers relationship. Educational interventions must focus on enhancing technical competence and psychological resilience through pre-exposure preparation, structured debriefing, and the integration of coping strategies. Nursing programs can enhance student wellbeing and improve clinical performance and patient outcomes by implementing a comprehensive approach to resuscitation education that recognises the multifaceted effects of these experiences.

Keywords: Nursing Student, Cardiopulmonary Resuscitation, Psychological Impact, Clinical Trauma, Resuscitation Training

Introduction

Nursing students often encounter substantial psychological and emotional difficulties when first confronted with cardiopulmonary resuscitation (CPR) scenarios in clinical environments(Matchim & Kongsuwan, 2015). The impact of witnessing CPR on nursing students represents a significant yet understudied challenge in nursing education (Fitzpatrick, 2025). While nursing programs effectively teach the technical aspects of CPR, they often fail to address the profound psychological and emotional consequences students experience when observing or participating in resuscitation events (Hood, 2020). Regardless of the critical importance of CPR training in nursing education, the literature reveals a notable gap in understanding how witnessing real-life resuscitation attempts affects students' mental well-being, clinical confidence, and professional development. Research indicates that unprepared nursing students frequently report symptoms of anxiety, helplessness, and trauma after witnessing CPR, particularly when patients do not survive (Hood, 2020; Matchim & Kongsuwan, 2015). These experiences can potentially undermine students' clinical confidence, contribute to compassion fatigue, and in some cases, lead to reconsideration of their career choice (Fitzpatrick, 2025). Many nursing students report feelings of anxiety, helplessness, and moral distress when confronted with emergency resuscitation situations, especially when outcomes are poor (Michael et al., 2025; Moon & Hyun, 2019). Despite the frequency of these distressing experiences, nursing curricula typically lack structured support systems, adequate pre-exposure preparation, and formal debriefing protocols to help students process and integrate these emotionally challenging clinical events (Hood & Copeland, 2024). This gap between technical training and psychological preparation represents a critical area requiring intervention to ensure the wellbeing and professional development of future nurses. This review will address the impact of CPR on nursing student.

Methods

This review obtains articles from all evidence related to nursing students, cardiopulmonary resuscitation, impact, witnesses, including academic papers, government reports, grey literature, and various reports published in 2014-2024 in Bahasa Indonesia and English. Keywords used in the search process are a combination of bachelor nursing, nursing students, cardiopulmonary resuscitation, impact, influence, witnesses, encounter. The review results are presented in 3 themes: psychological and emotional impact; CPR performance and clinical competence; Student-teacher relationship.

Results and Discussions

1. Psychological and Emotional Impact

a. Acute Stress Responses:

Students experience significant worry, powerlessness, and traumatic stress during and after CPR incidents, especially in cases of patient mortality or the presence of family members (Motsepe, 2015; Wayne, 2024). This psychological anguish often presents as intense dread, emotional desensitisation, and perceptions of professional failure. Studies reveal that nursing students often define these encounters as some of the most emotionally taxing components of their clinical training. These encounters may elicit somatic symptoms (e.g., tachycardia, sleeplessness) and enduring intrusive recollections, with some students indicating muscular tremors, stomach discomfort, and challenges in focussing on following clinical tasks (Hood & Copeland, 2024; Michael et al., 2025). The psychological effects may last for weeks or months after the occurrence, possibly hindering learning goals and clinical performance if not handled.(Hood & Copeland, 2021).

b. Second Victim Phenomenon:

Students who encounter negative outcomes during CPR may experience significant guilt, self-doubt, or crises of identity, reflecting the "second victim" syndrome seen in experienced nurses (Chavez, 2021). This psychological phenomenon is marked by intense feelings of personal responsibility, doubts regarding clinical competence, and distressing ruminations about alternative actions that could have been taken (Toews, 2023). Emotional responses frequently endure beyond the initial event, potentially disrupting later clinical learning experiences and the development of professional confidence (Park et al., 2022). The psychological impact is intensified by insufficient debriefing protocols in numerous clinical environments, where students often lack the structured emotional support, validation, and guided reflection required to effectively process these traumatic experiences (Hood & Copeland, 2021; Moon & Hyun, 2019).

c. Family Presence as a Stress Multiplier:

The visible distress of family members during cardiopulmonary resuscitation events significantly intensifies nursing students' anxiety and emotional distress (Motsepe, 2015). Research has consistently demonstrated that when family members are present during resuscitation attempts, nursing students experience substantially elevated stress levels compared to CPR situations without family presence (Waldemar et al., 2023; Wayne, 2024). In simulation-based educational settings, students who were required to interact with actors portraying distraught relatives reported heightened emotional burden, increased performance anxiety, and persistent fears of being negatively judged for any perceived clinical errors or hesitations (Kenny et al., 2017; Park et al.,

2022). This additional layer of interpersonal complexity creates a multifaceted stressor that compounds the already challenging technical aspects of participating in resuscitation efforts, further complicating students' ability to maintain clinical focus and emotional equilibrium during these high-stakes interventions.

2. **CPR Performance and Clinical Competence**

a. Technical Skill Execution:

Simulation studies indicate that the presence of distressed family members decreases compression timing accuracy by 18–22% (Kenny et al., 2017). However, it may also enhance compression depth, attributed to an increased adrenaline response in nursing students (Moon & Hyun, 2019). This physiological stress response generates a multifaceted performance dynamic in which specific elements of CPR execution decline, while others may improve unexpectedly: The presence of distressed relatives prolongs the time to first defibrillation by 15–30 seconds, a significant delay in practical CPR situations that can adversely affect patient survival rates(Kenny et al., 2017). This hesitation seems to arise from students' divided focus on technical procedures and the emotional distress of family members, resulting in cognitive overload during critical clinical situations.

b. Knowledge-Practice Gaps:

Only 21.8% of nursing students accurately identify the current CAB (compression-airway-breathing) sequence during assessments, and fewer than 17% can correctly recall the guideline-recommended compression depths (5–6 cm) in both theoretical and practical evaluations (Kenny et al., 2017). This knowledge gap indicates outdated curricula, infrequent updates in training, and inconsistent reinforcement of essential resuscitation protocols within nursing education programs. Approximately 85% of students recognise the essential role of CPR competency in their professional development; however, a concerning 34% consistently achieve scores categorised as "poor" on comprehensive knowledge assessments(Moon & Hyun, 2019). Notable deficiencies are observed in ventilation-to-compression ratios, identification of appropriate indications for initiating CPR, and correct hand positioning during chest compressions. Knowledge deficiencies remain evident among senior nursing students nearing graduation, indicating systemic issues in the structuring and reinforcement of resuscitation education within the nursing curriculum.

c. Non-Technical Skills:

Students encounter difficulties with leadership delegation, interprofessional communication, and family management during CPR, especially in situations characterised by role ambiguity (Groombridge et al., 2019). These challenges are particularly evident in high-stress resuscitation scenarios lacking clear role delineation(Campbell et al., 2020). Nursing students often encounter challenges in assertively delegating tasks to team members, sustaining effective communication

with physicians and other healthcare professionals, and addressing the emotional needs of family members present during resuscitation efforts (Twibell et al., 2018). Research shows that this complex issue arises from restricted exposure to interprofessional team dynamics in simulation training, inadequate preparation for family-witnessed resuscitation, and a lack of opportunities to practise leadership skills in structured educational settings (Campbell et al., 2020; Twibell et al., 2018). Role confusion can adversely affect resuscitation outcomes and exacerbate the psychological distress faced by nursing students involved in these critical situations.

3. Students-Teachers Relationship

a. Teachers as support system

Students may possess a personal history of trauma that can elicit psychological distress in clinical environments (Groombridge et al., 2019). Historic events, including abuse or neglect, substance abuse, eating disorders, bereavement, perinatal loss, involvement in accidents or emergencies, and mental health conditions, can significantly influence individual reactions (Hood, 2020). Pre-existing traumas can significantly affect nursing students' responses to witnessing cardiopulmonary resuscitation, potentially intensifying emotional reactions or eliciting unexpected psychological responses in high-stress clinical situations (Fitzpatrick, 2025). Studies suggest that traumatic memories can be reactivated in students when they face situations that possess similar sensory or emotional characteristics to their previous experiences (Hood & Copeland, 2024). Faculty cannot mandate the disclosure of personal information; however, students may gain advantages from recognising their trauma histories and comprehending how these experiences could affect their reactions to subsequent traumatic events (Hood & Copeland, 2021; Michael et al., 2025). Self-awareness functions as a protective factor, enabling students to formulate personalised coping strategies prior to facing potentially triggering clinical scenarios (Michael et al., 2025). Faculty members serve as a support system for students during critical events, offering a safe environment for processing emotional responses while maintaining boundaries regarding personal disclosure.

b. Course Recommendation

In addition to pre-clinical risk assessments, educational recommendations include extensive modifications to nursing school curricula (Hood, 2020). These involve the strategic integration of evidence-based coping strategies and emotional preparation resources into classroom teaching environments and high-fidelity simulation exercises (Moon & Hyun, 2019). The optimal preparation entails targeted education prior to students observing critical events in clinical settings; however, this comprehensive strategy is frequently logistically unfeasible due to the unpredictable nature of healthcare environments (Kenny et al., 2017). Nursing faculty should prioritise comprehensive preparatory education that encompasses various domains: effective stress

management techniques, personalised self-care practices, mindfulness-based interventions, theoretical and practical understanding of death and grief concepts, recognition and management of secondary traumatic stress, evidence-based strategies for preventing compassion fatigue, tools for early burnout recognition, and protocols for appropriate psychological trauma response (Hood & Copeland, 2024). Gates and Gillespie (2008) highlight the necessity of systematically educating nurses regarding their vulnerability to Secondary Traumatic Stress in the context of trauma patients (Gates & Gillespie, 2008). This education should encompass an understanding of characteristic symptoms, individual and environmental risk factors, and effective coping strategies applicable in diverse clinical settings.

Conclusion

The review indicates that observing and engaging in cardiopulmonary resuscitation events presents significant psychological and practical challenges for nursing students. Such experiences elicit significant anxiety, somatic symptoms, and trauma responses that may endure well beyond the initial event. The interplay of knowledge deficiencies in CPR protocols, communication challenges during team-based resuscitation, and the complexities of managing family presence results in a multidimensional impact that may adversely affect both student wellbeing and professional development. The disparity between technical training and psychological preparation constitutes a significant concern that necessitates prompt focus within nursing education. Current curricula often prioritise procedural competence, overlooking the emotional aspects of resuscitation experiences. The educational disparity renders students susceptible to distress, which may erode their clinical confidence and potentially result in compassion fatigue or re-evaluation of their career paths. Nursing programs can enhance student preparedness for challenging clinical experiences by addressing both the technical and psychological aspects of resuscitation education. This comprehensive strategy would safeguard student wellbeing, enhance clinical performance, and ultimately lead to improved patient outcomes. Nursing education must acknowledge that effective resuscitation training involves not only the mechanics of CPR but also the intricate human experiences associated with these critical events.

References

Campbell, A. R., Layne, D., Scott, E., & Wei, H. (2020). Interventions to promote teamwork, delegation and communication among registered nurses and nursing assistants: An integrative review. *Journal of Nursing Management*, *28*(7), 1465–1472.

Chavez, L. (2021). *Second Victim Phenomenon the Perioperative Providers Perspective.*

Fitzpatrick, G. (2025). Exploring the effects of delivering CPR on nurses' mental health and well-being. *Emergency Nurse*, *33*(3).

Gates, D. M., & Gillespie, G. L. (2008). Secondary traumatic stress in nurses who care for traumatized women. *Journal of Obstetric, Gynecologic & Neonatal Nursing*, *37*(2), 243–249.

Groombridge, C. J., Kim, Y., Maini, A., Smit, D. V., & Fitzgerald, M. C. (2019). Stress and decision-making in resuscitation: a systematic review. *Resuscitation*, *144*, 115–122.

Hood, T. L. (2020). *Students Who Witness Critical Events in the Clinical Setting: A Grounded Theory Qualitative Study*. University of Northern Colorado.

Hood, T. L., & Copeland, D. (2021). Student Nurses' Experiences of Critical Events in the Clinical Setting: A Grounded Theory. *Journal of Professional Nursing*, *37*(5), 885–893. https://doi.org/https://doi.org/10.1016/j.profnurs.2021.07.007

Hood, T. L., & Copeland, D. (2024). Students who witness critical events in the clinical setting: Recommendations for prevention of psychological trauma. *Journal of Professional Nursing*, *52*, 70–79. https://doi.org/https://doi.org/10.1016/j.profnurs.2024.03.007

Kenny, G., Bray, I., Pontin, D., Jefferies, R., & Albarran, J. (2017). A randomised controlled trial of student nurse performance of cardiopulmonary resuscitation in a simulated family-witnessed resuscitation scenario. *Nurse Education in Practice*, *24*, 21–26. https://doi.org/https://doi.org/10.1016/j.nepr.2017.03.004

Matchim, Y., & Kongsuwan, W. (2015). Thai nursing students' experiences when attending real life situations involving cardiac life support: A Phenomenological study. *Nurse Education Today*, *35*(12), 1186–1191.

Michael, T., Chapin, L. A., & Quitoriano, C. D. (2025). *Paramedicine students' experiences on placement: Preparedness for the emotional impacts of witnessing trauma*.

Moon, H., & Hyun, H. S. (2019). Nursing students' knowledge, attitude, self-efficacy in blended learning of cardiopulmonary resuscitation: a randomized controlled trial. *BMC Medical Education*, *19*, 1–8.

Motsepe, T. L. (2015). *Nurses' Experiences and Attitudes Towards Family Witnessed Resuscitation in Accident and Emergency Units in Two South African Hospitals*. University of the Witwatersrand, Johannesburg (South Africa).

Park, H. J., Choi, D., Park, H. A., & Lee, C. A. (2022). Nurse evaluation of stress levels during CPR training with heart rate variability using smartwatches according to their personality: a prospective, observational study. *PloS One*, *17*(6), e0268928.

Toews, A. (2023). *When the adrenaline wears off: the arduous passion of emergency resuscitation nursing Nurses' experiences of in-hospital resuscitation events and clinical event debriefing in an adult emergency*.

Twibell, R., Siela, D., Riwitis, C., Neal, A., & Waters, N. (2018). A qualitative study of factors in nurses' and physicians' decision-making related to family presence during resuscitation. *Journal of Clinical Nursing*, *27*(1–2), e320–e334.

Waldemar, A., Strömberg, A., Thylén, I., & Bremer, A. (2023). Experiences of family-witnessed cardiopulmonary resuscitation in hospital and its impact on life: An interview study with cardiac arrest survivors and their family members. *Journal of Clinical Nursing*, *32*(19–20), 7412–7424.

Wayne, N. J. (2024). *Family Presence During Resuscitation: A Descriptive Study Of Perceptions Of Nursing Students*. Kent State University.