

EMERGENCY NURSES' EXPERIENCES IN PERFORMING CARDIOPULMONARY RESUSCITATION IN CARDIAC ARREST PATIENTS: A LITERATURE REVIEW

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ABSTRACT

Background: Cardiopulmonary resuscitation (CPR) is the primary lifesaving measure for patients experiencing cardiac arrest, and emergency nurses play a central role in its implementation. Nurses' experience in performing CPR is a critical factor influencing resuscitation quality, clinical decision-making, and patient outcomes. Emergency Department nurses often experience stressful and emotional experiences when performing Cardiopulmonary Resuscitation (CPR) on patients with cardiac arrest, including the challenge of staying focused and working in a critical situation despite high pressure from time and patient condition, which has been explored in a qualitative study of nurses' experiences in direct cardiopulmonary resuscitation.

Purpose: This article aims to identify and analyze the experiences of emergency nurses in performing CPR on cardiac arrest patients based on a literature review of various recent studies.

Methods: This research is a secondary qualitative research with a systematic literature review design based on experience. Literature review search using Google Scholar electronic database, Science Direct published in 2020-2025 with search keywords emergency OR Emergency AND Nurse OR Nurse AND CPR OR CPR AND Cardiac Arrest OR Cardiac Arrest. Inclusion Criteria are Journals related to Emergency Nursing Experience &Journals discussing cardiopulmonary resuscitation. Data analysis involved critical appraisal, skimming, and scanning, separating irrelevant articles from relevant ones.

Results: There were 6 articles found that were in accordance with the topic, and through review, it was found that they showed that the literature review indicates that emergency nurses' experience in performing cardiopulmonary resuscitation (CPR) on cardiac arrest patients is influenced by a combination of technical skills, psychological preparedness, the work environment, and ongoing training.

Conclusion: Emergency nurse experience is a key element in the successful implementation of CPR on cardiac arrest patients. Strengthening the capacity of nurses through education, training, and work environment support is a strategic step to improve the quality of emergency services and patient safety. Emergency nurses' CPR experiences involve technical skills, emotional challenges, teamwork, and institutional support, influencing resuscitation quality and nurse well-being.

Keywords: Cardiopulmonary Resuscitation, Cardiac Arrest, Clinical Experience, Emergency Nurses

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BACKGROUND

Cardiac arrest is an emergency requiring rapid and appropriate intervention to improve the patient's chances of survival. This chain of action, from recognition of cardiac arrest to providing high-quality chest compressions and early defibrillation, has been mapped out in international resuscitation guidelines; practical changes in these guidelines (e.g., emphasis on first compressions and updated algorithms) require the readiness and continuous updating of clinical skills by first responders, including nurses in the emergency department (Aty, Y. M. V., Tanesib, I., & Mochsen, R., 2021). Beyond these technical protocols, nurses' experiences during resuscitation influence decision-making, team coordination, and the quality of the resuscitation itself. Several international qualitative studies report that nurses experience a mix of emotions, ranging from anxiety and time pressure to a sense of professional responsibility, and emphasize the importance of repeated practice, simulations, and debriefing to reduce anxiety and increase confidence when facing chaotic and dynamic resuscitation situations. Similar findings also indicate non-technical factors (communication, leadership, team support) often determine the success of the resuscitation process (Cristy, N. A., Ryalino, C., Suranadi, I. W., & Hartawan, 2022).

Nurses in emergency departments, ICUs, and critical care units are often on the front lines of cardiac arrest management. Therefore, the quality of nurses' knowledge, skills, and experience in performing CPR is a crucial factor in determining the outcome of resuscitation (Kuchaki, Z., Taheri, M., Esfahani, H., & Erfanifam, T., 2022). However, the implementation of CPR by nurses not only requires technical and cognitive abilities (knowledge & skills), but is also influenced by experience, psychological reactions, team dynamics, and urgent situations in the emergency room which often cause pressure, stress, and ethical dilemmas (Lee MR, Cha C, 2018).

Several studies have shown that nurses' knowledge and training levels influence their ability to perform CPR in accordance with standards. For example, a study at Pelamonia Hospital found that nurses' knowledge of CPR procedures was considered "adequate," but still differed from international guidelines (Thalib, A. H., & Nur Aisa, 2020). In addition, low knowledge and procedural uncertainty can be fatal for patients (Aty, Y. M. V. B., & Blasius, G., 2021), the psychological and emotional aspects experienced by nurses during and after performing CPR have also received attention. In a qualitative study in Korea, ED nurses reported feelings of tension, internal conflict, and long-term psychological impacts after performing CPR (Lee, M. R., & Cha, 2018). This condition shows that carrying out CPR is not just a technical action but also a complex process that affects nurses as individuals and as part of a health team.

With the above considerations in mind, exploring the experiences of emergency nurses in performing CPR on cardiac arrest patients is important, as it can help understand what factors support or hinder the quality of CPR, as well as how systemic training and support can be optimized to improve patient outcomes. This literature review aims to identify the experiences of emergency nurses performing cardiopulmonary resuscitation (CPR) on patients with cardiac arrest, based on previous research.

OBJECTIVE

Cardiac arrest is a critical emergency requiring rapid intervention and strict adherence to international resuscitation guidelines to ensure patient survival. While these guidelines map out the chain of action, practical implementation demands continuous readiness and the updating of clinical skills by first responders, particularly emergency nurses (Aty, Tanesib, & Mochsen, 2021). However, the successful execution of Cardiopulmonary Resuscitation (CPR) extends beyond technical protocols; it is significantly influenced by non-technical factors such as communication, leadership, and team support (Cristy, Ryalino, Suranadi, & Hartawan, 2022). Furthermore, the quality of a nurse's knowledge, skills, and experience acts as a crucial determinant in the final outcome of resuscitation efforts (Kuchaki, Taheri, Esfahani, & Erfanifam, 2022). Additionally, the procedure is a complex process often accompanied by psychological pressure, stress, and ethical dilemmas that impact the nurse as an individual (Lee & Cha, 2018). Therefore, this literature review aims to identify and analyze the experiences of emergency nurses in performing CPR on cardiac arrest patients to understand the factors that support or hinder resuscitation quality.

METHODS

This research is a literature review. The population and sample used international and national journals related to the experiences of emergency nurses, CPR, and cardiac arrest. This article employs a structured qualitative literature review to synthesize existing evidence on emergency nurses' experiences in performing cardiopulmonary resuscitation in cardiac arrest patients. The search was conducted through electronically published journals via the Google Scholar database. Literature review search using Google Scholar electronic database, Science Direct published in 2020-2025 with search keywords emergency OR Emergency AND Nurse OR Nurse AND CPR OR CPR AND Cardiac Arrest OR Cardiac Arrest. Inclusion Criteria are Journals related to Emergency Nursing Experience & Journals discussing cardiopulmonary resuscitation. Data analysis involved critical appraisal, skimming, and scanning, separating irrelevant articles from relevant ones.

RESULTS

Table 1. Review Article Analysis Results

Reserchear & Title years	Studi desain	Populasi sample	Finding
Smith et al., 2020 Experiences of Emergency Nurses in Performing CPR	Kualitatif, fenomenolog	12 emergency nurses	Nurses experience high stress, a need for training, and constraints of limited equipment
Handayani & Sutopo, 2020 Analisis Kemampuan Penolong Awam	Mixed-method	34 community	Lack of training impacts the effectiveness of

	dalam Pertolongan Darurat	respondents	Actions
Lee & Kim, 2019	Emergency Nurses' Perception of Cardiac Arrest Management	Quantitative survey	210 emergency nurses
Setiawan, 2025	Kompetensi Perawat Emergency dalam RJP	Survei Quantitative	85 nurses RS type B & C
Rahmawati, 2022	Pengalaman Perawat dalam Penanganan Cardiac Arrest	Qualitative	10 emergency room nurses
Yusuf & Pratiwi, 2023	Evaluasi Kompetensi Perawat Emergency	Observasional	60 nurse

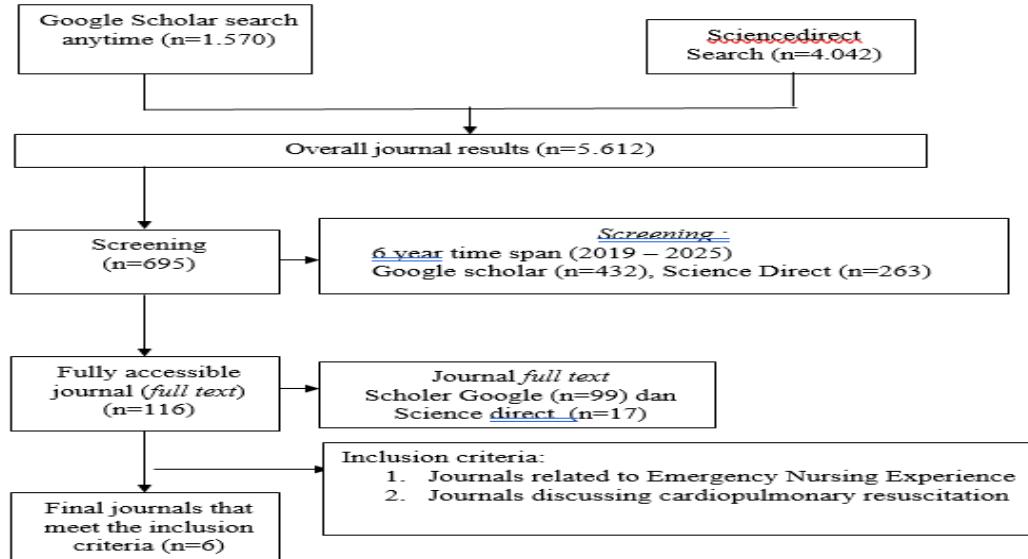


Figure 1. Article Searching

DISCUSSION

Emergency nurses' experience in performing cardiopulmonary resuscitation (CPR) is a critical factor influencing the successful management of cardiac arrest patients. The literature shows that a nurse's ability to perform CPR depends not only on technical skills but also on mental preparedness, clinical experience, team coordination, and emergency department workload. According to the American Heart Association (AHA, 2020), the quality of CPR is influenced by the healthcare provider's competence in performing effective compressions, adequate ventilation, and timely application of the cardiac arrest management algorithm.

Several studies have shown that nurses with more experience in emergencies tend to respond more quickly and accurately to cardiac arrest. This is supported by findings by Hasanah & Yusuf (2023), who showed that clinical experience contributes to increased confidence and decision-making skills in critical situations. This experience helps nurses recognize clinical signs more quickly, reduces hesitation, and increases the effectiveness of interventions.

On the other hand, psychological conditions and emotional stress also influence nurses' experiences when performing CPR. A qualitative study by Yuliana et al. (2021) emphasized that emergency nurses often face anxiety, time pressure, and high performance demands during resuscitation. This pressure can affect accuracy, physical stamina, and communication between team members. However, repeated experience in similar situations provides greater adaptability, making nurses better prepared for the next incident.

Work environment factors, such as equipment availability, operational standards, and team dynamics, also influence nurses' experiences. Research by Wulandari (2024) found that high workloads in the emergency department and ineffective team coordination can hinder optimal CPR implementation. Good team coordination has been shown to improve compression accuracy, role alignment, and decision-making during code blues.

Regular training is another crucial factor. The AHA (2020) emphasizes that CPR skills tend to decline within 3–6 months without rehearsal, so regular training programs are necessary to maintain competency. Setiawan (2025) adds that training and simulations improve motor skills, technical accuracy, and mental preparedness for nurses facing cardiac arrest. Training also helps nurses internalize algorithms and procedures, allowing for faster and more structured interventions.

This literature review highlights that emergency nurses frequently experience significant psychological impacts, including stress, emotional exhaustion, and moral distress, when performing cardiopulmonary resuscitation on cardiac arrest patients. Coping strategies such as peer support, clinical debriefing, resilience training, and supportive leadership are identified as essential in mitigating these psychological burdens. However, this review is limited by the heterogeneity of study designs, variations in cultural and clinical contexts, and the predominance of qualitative studies with small sample sizes, which may affect the generalizability of findings. Additionally, publication bias and the restriction to English-language articles may have limited the scope of the evidence. Therefore, future research is recommended to employ mixed-methods and longitudinal designs, explore culturally diverse emergency settings, and evaluate the effectiveness of structured psychological support interventions for emergency nurses.

Overall, the literature review shows that emergency nurses' experience in performing CPR is a result of the interaction between technical competence, clinical experience, psychological preparedness, teamwork effectiveness, and ongoing training. Positive experiences can improve CPR performance, while negative experiences, such as failed resuscitation, can be emotionally burdensome and require psychological support. Therefore, healthcare institutions need to ensure routine CPR training, provide a supportive work environment, and strengthen a teamwork culture to improve the quality of cardiac arrest patient care.

CONCLUSION

The literature review indicates that emergency nurses' experience in performing cardiopulmonary resuscitation (CPR) on cardiac arrest patients is influenced by a combination of technical skills, psychological preparedness, the work environment, and ongoing training. Adequate clinical experience enables nurses to more quickly recognize cardiac arrest, make appropriate decisions, and perform compressions and ventilations according to standards. Mental preparedness and the ability to manage emotional distress have also been shown to contribute to the quality of CPR implementation, especially in emergency situations with high time pressure. Furthermore, teamwork dynamics and the emergency room environment significantly determine the effectiveness of resuscitation measures. Good team coordination can expedite the treatment process and increase the chances of successful resuscitation. Routine training and simulations are crucial in maintaining nurse competence, as CPR skills can decline without regular training. Therefore, improving the experience and competence of emergency nurses needs to be supported by institutional policies through ongoing training, psychological support, and the establishment of a solid teamwork culture. Overall, emergency nurse experience is a key element in the successful implementation of CPR on cardiac arrest patients. Strengthening the capacity of nurses through education, training, and work environment support is a strategic step to improve the quality of emergency services and patient safety.

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Author 2: transcribing interview data, ensuring validity through member checking, and checking the latest literature

CONFLICTS OF INTEREST

There are no conflicts of interest in this article.

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