



The role of the nursing team in cardiac arrest care: Literature review

O papel da equipe de enfermagem no atendimento de uma parada cardiorrespiratória: Revisão de literatura

DOI: 10.56238/isevjhv3n3-016

Receipt of originals: 05/11/2024

Publication acceptance: 05/31/2024

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ABSTRACT

Cardiorespiratory arrest (CPA) occurs when the heartbeat suddenly stops and can cause various damages to the victim, such as irreversible neurological problems or even result in death, so it is crucial to take appropriate measures quickly. The objective of this study was to review the literature based on the role of the nursing team in the care of a patient in cardiorespiratory arrest. The articles analyzed corresponded to the years from 2010 to 2023, available in the following databases: Scientific Electronic Library Online (SCIELO), US National Library of Medicine (PUBMED), Virtual Health Library of the Ministry of Health (VHL) and Google Scholar. The following descriptors were used: Role of the nursing team AND Recovery OR Cardiorespiratory arrest, cardiac arrest AND cardiopulmonary resuscitation AND nursing. According to the inclusion and exclusion criteria, 9 articles were selected in the end. In conclusion, this study allowed us to highlight the importance of the nurse's role in the care of CPA victims, effectively identifying the changes before or after the arrest, as well as the symptoms and signs, intervening early and providing the necessary care.

Keywords: Cardiorespiratory arrest, Cardiac arrest, Nursing staff, Cardiopulmonary resuscitation, Resuscitation team.

INTRODUCTION

Considered by the American Heart Association (AHA) as an extreme emergency complication, cardiorespiratory arrest (CPA) consists of a severe and sudden interruption of the heart's respiratory and mechanical activities, leading to an inadequate or absence of heart rhythm and consequently to the risk of death for the affected victims (AMERICAN HEART ASSOCIATION, 2015).

CRP can result in loss of consciousness, shortness of breath, unresponsiveness to tactile, painful, verbal stimuli, and palpable pulses. It is crucial to identify and immediately begin

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cardiopulmonary resuscitation (CPR) in an appropriate and efficient manner in order to increase the victim's chances of survival after CPA (Bastarrica et al., 2020).

The nursing team is on the front line in the care of CPA, as well as in the success of CPR together with the physician. The primary goal of CPR is to improve cardiopulmonary incumbency and systemic perfusion; Subsequently, refer the out-of-hospital patient to an intensive care unit or to the emergency room. It is important to identify the reason and prevent the recurrence of this event; and finally, apply parameters that improve the patient's long-term prognosis, keeping neurological functioning preserved (BATISTA et al., 2021).

The patient's chances of survival can double and even triple when these CPR maneuvers are well executed, as they constitute the best chance of recovery of cardiopulmonary and brain function (MOURA et al., 2019).

We are facing a critical situation that requires great expertise, since early identification and understanding of the causes that lead a patient to cardiorespiratory arrest are fundamental for the prognosis. Therefore, the provision of nursing care demands agility, effectiveness, scientific theoretical basis and ability to perform procedures, in addition to harmonious teamwork (NACER; BARBIERI, 2015).

Thus, it is essential that nursing masters the procedures and devices necessary for care in cases of CPA, given that the patient's chances of survival depend on this. The nursing team needs to have the knowledge, and know how to identify the signs of a CPA to intervene effectively (LIU et al., 2019, p. 67).

Understanding the role of the nursing team in patient care in CPA, it is important to highlight the importance of seeking knowledge and improvement at all stages, from the recognition of CPA, cardiopulmonary resuscitation (CPR) and subsequent care.

Professionals must be qualified and trained to care for victims of CPA, ensuring that patients and family members receive health care free from harm resulting from malpractice, negligence, or imprudence (SOCIEDADE BRASILEIRA DE CARDIOLOGIA, 2019).

METHODOLOGY

This is a literature review, according to Gil (2002) this type of research allows a greater reach of information, in addition to allowing a better construction and definition of the conceptual framework of the study. In view of the above, the guiding question arises: Does the nursing team have enough knowledge to identify and provide adequate care to CPA victims?

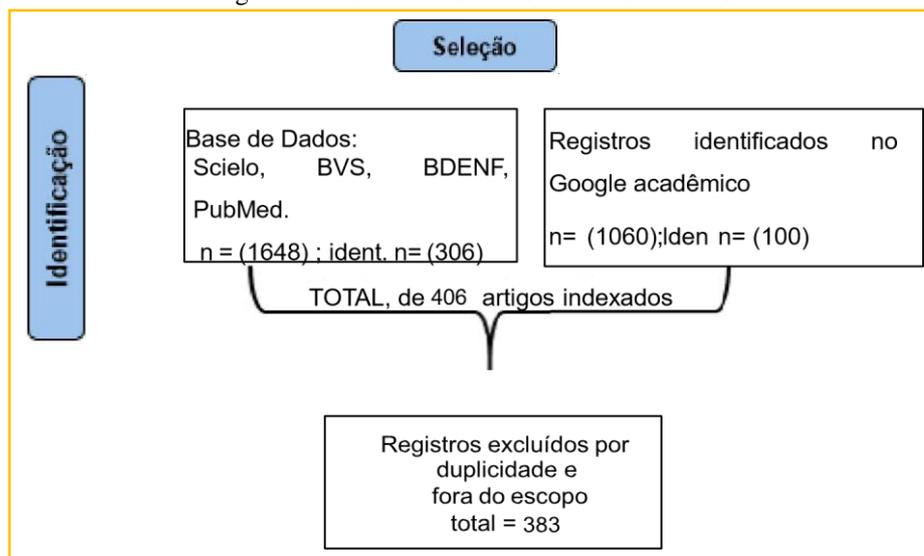
The articles were searched in the databases of Scielo, VHL, BDNF and PubMed and Google scholar.

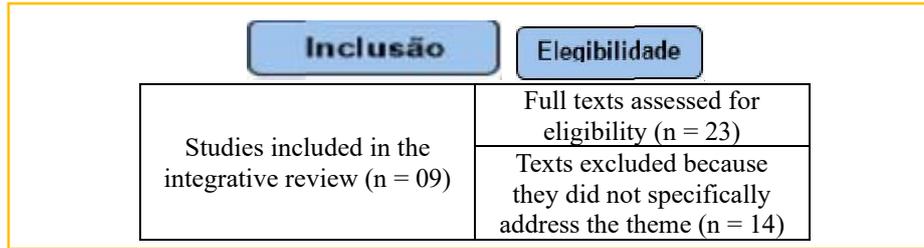
The inclusion criteria were articles published in Portuguese, from 2012 to 2023, available in full, and whose title was the keywords: Role of the nursing team AND Recovery OR Cardiorespiratory arrest, cardiac arrest AND cardiorespiratory resuscitation AND nursing.

Figure 1 shows the flowchart of the articles analyzed and selected according to the inclusion and exclusion criteria.

Out of a total of 1648 articles from the databases (Scielo, VHL, BDNF), 306 were selected. With 1060 articles from google scholar, 100 were selected, adding up to a total of 406 identified articles. Of this total, 383 articles were excluded for reasons of duplicity and for being out of scope, leaving 23 articles per eligibility criterion. Subsequently, 14 articles were excluded because they did not specifically address the theme, thus 09 articles were selected for the integrative review.

Figure 1 – Flowchart for the selection of articles:





Source: Author, 2024

RESULTS AND DISCUSSION

Table 1 – List of selected articles.

Author	ANO/METHODOLOGY	Title	Objective	Result
PAGANINI, E.; SOUSA, D.A.	2023 literature review, descriptive	The role of the nurse in the initial care of cardiorespiratory arrest and post-arrest care	To analyze the importance of nurses in the initial care of CPA and post-cardiac care, especially in the Intensive Care Unit.	The nurse is essential in the CPA, as he is close to the patient, providing care in the extra and intra-hospital environment such as the ICU
SILVA, F.E.A. et al.	2020 Review literature	Nurses' role during cardiorespiratory arrest in critically ill patients: a literature review	OBJECTIVE: To analyze the role of nurses during CPA in the literature.	After analyzing the studies, it was possible to identify that it is extremely important for the nursing professional to perform care during PCT. There was also a need to prepare and train nurses for possible emergencies for critically ill patients.
OLIVEIRA, A.B; SILVA, L.T.O; SOUZA, C. S	2022 Review literature	The role of nurses in cases of cardiorespiratory arrest: an integrative review of the literature	Discuss the nurse's analysis process to identify the initial symptoms of a CPA; present appropriate conducts for first aid actions; to identify the main post-CPA care and the action of the nurse in this context.	Nursing care for patients who are on the verge of undergoing CPA, and those who have already presented CPA, need to be reinforced, because with a rigid follow-up protocol and humanized treatment, it is possible to identify symptoms and establish a nurse-patient relationship with quality of communication



				and, consequently, quality in preventive and repressive treatment.
SOUSA, Y.V.L; BORGES L.S.C; VELOSO, L.C	2021: The Integrative Literature Review of the Exploratory Type with a Quantitative Approach	Nurse assistance in cardiorespiratory arrest at the Mobile Emergency Care Service (SAMU)	OBJECTIVE: To analyze the care of the nurse during a cardiorespiratory arrest in the Mobile Emergency Care Service.	It was observed that there is still a lack of knowledge about the protocol for CPA on the part of the nurses, focused on the importance of efficient CPR maneuvers, since the nurse is mostly the first to arrive at the scene.
BERNOUCHE C. Et al.	2019 review of relevant information on Cardiopulmonary Resuscitation (CPR)	Update of the Brazilian Society of Cardiology's Guideline on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care	Optimize cardiopulmonary function and vital organ perfusion after RCE. Transport/transfer to an appropriate hospital or ICU with a complete post-CPA treatment system. Identify and treat acute coronary syndromes and other reversible causes. Control temperature to optimize neurological recovery. Predict, treat, and prevent multiple organ dysfunction. This includes avoiding excessive ventilation and hyperoxia.	Orderly training and the adoption of well-established protocols have shown a positive impact on results and cost-effectiveness in Brazil and in several Latin American countries.
FARIAS, I. S. de. Et al.	2021 The Integrative Review of literature	Nursing professionals' knowledge of cardiorespiratory arrest in the emergency room	To discuss the importance of nursing professionals' knowledge in the face of a situation of cardiorespiratory arrest in the emergency room.	It can be seen that constant updates for these professionals are important, contributing to the recognition of the main signs and symptoms of a CPA, performing necessary interventions and qualified maneuvers without interfering with the patient's health.



CASANOVA Et al.	2016 descriptive study, with a qualitative- quantitative approach and use of the Critical Incident Technique	Cardiorespiratory arrest and cardiopulmonary resuscitation: experiences of the nursing team from the perspective of the critical incident technique	To establish the critical requirements in the care of cardiorespiratory arrest (CPA) and in the performance of cardiopulmonary resuscitation (CPR) by the nursing team in an emergency unit, using the Critical Incident Technique.	Attending to CPA requires fast, assertive conducts based on competencies and skills. Therefore, it must be immediate, systematized and qualified, basic requirements for patient safety, reducing the difficulties identified by the team and favoring the chances of resuscitation.
Campanharo C.R. Et al.	2015 Conducting a cross- sectional study at a university hospital	Advantages of the cut-off study performed by nurses in cardiorespiratory arrest	Identify factors associated with survival after cardiorespiratory arrest	Of the 285 patients, 16 survived discharge and 13 remained alive after one year, making it possible to identify factors associated with survival. There were no losses in follow-up.
Guskuma E. M. et al.	2019 cross-sectional, descriptive and quantitative study	Nursing staff's knowledge of cardiopulmonary resuscitation	To identify the nursing team's theoretical knowledge about cardiopulmonary resuscitation maneuvers in basic life support, associating such knowledge with sociodemographic, economic and professional training variables.	This study contributes to the practice because, by identifying the main points of knowledge deficit, it is possible to implement individualized and more effective education strategies for the care of cardiorespiratory arrest situations.

Source: The author, 2024.

Based on the aforementioned studies, it is clear that nurses play a crucial role in the care of patients in cardiorespiratory arrest, due to their proximity to the patient at this critical moment. Their presence is essential in the care of these people both inside and outside the hospital environment, as well as intra-hospital, where lives may be in danger. Therefore, it is essential that these professionals receive the appropriate permanent training to act efficiently during cardiopulmonary resuscitation, identifying any changes in patients before or after CPA and



intervening in the face of signs and symptoms, thus increasing surveillance and allowing earlier interventions to prevent the occurrence of CPA in different situations.

However, most of the problems that arise in these situations are due to the lack of organization of the environment and prioritization of certain stages, the lack of knowledge of the methods and materials available, the excess or lack of personnel and, mainly, errors in the division of activities during the care process, functions performed by the nurse among the team members (RANGEL; OLIVEIRA, 2010).

Thus, we can report that the survival rate of individuals with CPA is related to the time between the occurrence of the event and the beginning of resuscitation, and that the survival rate depends not only on the care in a short period of time, but also on the efficiency of the method of performing the resuscitation maneuver. Research also shows that resuscitation immediately after an accident increases the chances of survival. However, nurses must have theoretical and practical knowledge, leadership skills, maturity, discernment, and emotional stability to care for patients (RANGEL; OLIVEIRA, 2010).

In addition, the nurse organizes the entire nursing staff to provide continuous critical care to the patient during and after a successfully performed arrhythmic event. They also have the responsibility to provide assistance to family members through clarifications to reverse CPA or death, thus reducing the pain and anxiety of the victim's family (REIS, 2020).

In this context, since the nurse is the team leader and the disseminator of knowledge, it is essential to ensure that the team is constantly updated and improves its knowledge on the subject. Professionals able to provide care for CPA should participate in basic and advanced training programs, as a dedicated team will achieve better quality of care, thus increasing survival rates (ARANTES; FERREIRA, 2022).

This training should start with academic training, provide continuous training and recycling, update knowledge and methods according to the American Heart Association, simulate group care and use protocols with data to follow. Therefore, some nursing schools focus on learning BLS (Basic Life Support) and ALS (Advanced Life Support) in their teaching. However, most nurses feel unable to work in emergency situations, especially in CPA. It is also evident that training facilitates the exchange of experiences between clinical nurses and managers, increasing knowledge (MASCARENHAS; COSTA, 2014).

So it is proven that the role of nursing is what increases the survival of these people, as long as it is done with some knowledge. Therefore, CPA cannot be taken lightly, as any mistake by the



team in carrying out this rehabilitation process can seriously harm the patient, especially because in Brazil every year there are many cases of death due to cardiorespiratory arrest.

CONCLUSION

Therefore, the content mentioned in this study portrays the importance of the nurse in CPA, as this professional is in direct contact with the patient, providing all the necessary care in the initial care and after the CPA, as soon as possible and collaborating to increase the victim's survival.

Therefore, these professionals must carry out continuous training to provide quality care to patients with CPA, since the success of interventions performed in occurrences of this type is highly dependent on the degree of preparation of nurses to face this condition.

Thus, the information obtained reveals that numerous other studies can be carried out in relation to nursing care for the individual, because of the relevance of the subject and multiple contributions to professionals and also to the academic environment, adding greater knowledge on this theme.



REFERENCES

- American Heart Association. (2015). Atualização das Diretrizes de RCP e ACE. Retrieved March 14, 2024, from <https://eccguidelines.heart.org/wp-content/uploads/2015/10/2015-AHA-Guidelines-Highlights-Portuguese.pdf>
- Arantes, J. E. G., & Ferreira, T. V. (2022). Cuidados de enfermagem no atendimento em parada cardiorrespiratória. *Revista Saúde dos Vales*, 1(1), 1-9. Retrieved from https://www.revistas.unipacto.com.br/storage/publicacoes/2022/822_cuidados_de_enfermag_em_no_atendimento_em_parada_cardiorrespiratoria.pdf
- Bastarrica, E. G., Santos, F., Conte, M., & Baldo, A. P. V. (2020). Perfil epidemiológico dos pacientes em parada cardiorrespiratória: Uma revisão integrativa. *Research, Society and Development*, 9(12), e:1559126024. <https://doi.org/10.33448/rsdv9i12.6024>
- Batista, G. L., et al. (2021). Atendimento inicial da parada cardiorrespiratória e cuidados pós-parada. *Revista Corpus Hippocraticum*, 2(1), 1-8. Retrieved from <https://revistas.unilago.edu.br/index.php/revista-medicina/article/view/604>
- Bernoche, C., Timerman, S., Polastri, T. F., Giannetti, N. S., Siqueira, A. W. S., Piscopo, A., et al. (2019). Atualização da Diretriz de Ressuscitação Cardiopulmonar e Cuidados de Emergência da Sociedade Brasileira de Cardiologia – 2019. *Arquivos Brasileiros de Cardiologia*, 113(3), 449-663. <https://doi.org/10.5935/abc.20190203>
- Casanova, J. C. M., et al. (2016). Parada cardiorrespiratória e ressuscitação cardiopulmonar: Vivências da equipe de enfermagem sob o olhar da técnica do incidente crítico. *Revista de Enfermagem UFPE Online*, 10(9). Retrieved from <https://periodicos.ufpe.br/revistas/revistaenfermagem/article/view/10439>
- Farias, I. S. de, et al. (2021). O conhecimento dos profissionais de enfermagem frente à parada cardiorrespiratória na emergência. *Research, Society and Development*, 10(16). <https://doi.org/10.33448/rsd-v10i16.22373>
- Guskuma, E. M., Lopes, M. C. B. T., Piacezzi, L. H. V., Okuno, M. F. P., Batista, R. E. A., & Campanharo, C. R. V. (2019). Conhecimento da equipe de enfermagem sobre ressuscitação cardiopulmonar. *Revista Eletrônica de Enfermagem*, 21, 52253. <https://doi.org/10.5216/ree.v21.52253>
- Campanharo, C. R., Vancini, R. L., Lopes, M. C., Okuno, M. F., Batista, R. E., Atallah, Á. N., & Góis, A. F. (2015). Vantagens do estudo de coorte realizado por enfermeiros em parada cardiorrespiratória. *Revista da Escola de Enfermagem da USP*, 49(5), 762-766. <https://doi.org/10.1590/S0080-623420150000500008>
- Gil, A. C. (2002). Como elaborar projetos de pesquisa. São Paulo: Atlas.



- Casanova, J. C. M., et al. (2016). Parada cardiorrespiratória e ressuscitação cardiopulmonar: Vivências da equipe de enfermagem sob o olhar da técnica do incidente crítico. *Revista de Enfermagem UFPE Online*, 10(9). Retrieved from <https://periodicos.ufpe.br/revistas/revistaenfermagem/article/view/10439>
- Liu, M., Shuai, Z., Ai, J., Tang, K., Liu, H., Zheng, J., Gou, J., & Lv, Z. (2019). Mechanical chest compression with LUCAS device does not improve clinical outcome in out-of-hospital cardiac arrest patients. *Medicine*, 98(44), e17550. <https://doi.org/10.1097/MD.00000000000017550>
- Mascarenhas, M. L. S., & Costa, R. L. L. (2014). A atuação da equipe de enfermagem na parada cardiorrespiratória na unidade de terapia intensiva: Uma revisão bibliográfica. Salvador. Retrieved from <https://bibliotecaatualiza.com.br/arquivotcc/EU/EU24/MASCARENHASmariaCOSTA-renata.pdf>
- Mello, M. M. S., Pederneiras, L. F., Paula, C. R., Colares, R. P., Coelho, O. F. L., & Bragança, R. D. (2019). Treinamento teórico-prático de equipe multidisciplinar para atendimento de parada cardiorrespiratória em enfermaria. *Revista da Sociedade Brasileira de Clínica Médica*, 17(1), 2-6. Retrieved from <https://pesquisa.bvsalud.org/portal/resource/pt/biblio-1025944>
- Moura, L. T. R., et al. (2012). Assistência ao paciente em parada cardiorrespiratória em unidade de terapia intensiva. *Revista Rene*, 13(2), 419-427.
- Nacer, D. T., & Barbieri, A. R. (2015). Sobrevivência a parada cardiorrespiratória intra-hospitalar: Revisão integrativa da literatura. *Revista Eletrônica de Enfermagem*, 17(3). Retrieved from <https://www.fen.ufg.br/revista/v17/n3/pdf/v17n3a14.pdf>
- Oliveira, A. B. de, Silva, L. T. O., & Souza, C. S. e. (2022). Atuação do enfermeiro nos casos de parada cardiorrespiratória: Revisão integrativa da literatura. *Pesquisa, Sociedade e Desenvolvimento*, 12, e582111235159. <https://doi.org/10.33448/rsd-v11i12.35159>
- Paganini, E., & Sousa, D. A. (2023). O papel do enfermeiro no atendimento inicial da parada cardiorrespiratória e os cuidados pós-parada. *Ciências da Saúde*, 26(120). <https://revistaft.com.br/o-papel-do-enfermeiro-no-atendimento-inicial-daparadacardiorrespiratoria-e-os-cuidados-pos-parada/>
- Rangel, A. M., & Oliveira, M. L. M. (2010). O papel do enfermeiro no atendimento da parada cardiorrespiratória na unidade de terapia intensiva adulto. *UNINGÁ Review*, 4(1), 36-45. Retrieved from https://www.Mastereditora.com.br/periodico/2013_0708_173949.pdf
- Reis, C. M. B. (2020). Atuação e dificuldades do profissional enfermeiro frente a uma parada cardiorrespiratória: Uma revisão narrativa. Faculdade de Ciências da Educação e Saúde, Brasília. Retrieved from <https://repositorio.uniceub.br/jspui/bitstream/prefix/14987/1/TCC%20Final%20Camila%20Mendon%C3%A7a.pdf>



- Quilici, A. P., et al. (2015). *Enfermagem em cardiologia* (29th ed.). São Paulo: Atheneu.
- Santos, M. A. R. C., & Galvão, M. G. A. (2014). A elaboração da pergunta adequada de pesquisa. *Resid Pediatr*, 4(2), 53-56.
- Silva, F. E. A. da, Lopes, M. Á. C. P., Mafaldo, P. R. F., Silva, A. P. da, Nascimento, J. F. M. do, Aguiar, T. dos S. de, & Almeida, K. A. B. de. (2020). Atuação do enfermeiro durante a parada cardiorrespiratória em pacientes críticos: Revisão de literatura. *Brazilian Journal of Health Review*, 3(2), 2783-2796. <https://doi.org/10.34119/bjhrv3n2-122>