

RESEARCH ARTICLE (ORIGINAL)

Perceived Difficulties Among Nurses in In-Hospital Cardiopulmonary Resuscitation: A Descriptive Correlational Study

Dificuldades Percecionadas pelos Enfermeiros na Reanimação Cardiopulmonar Intra-Hospitalar: Um Estudo Descritivo e Correlacional

Dificultades Percibidas por el Personal de Enfermería en la Reanimación Cardiopulmonar Intrahospitalaria: Un Estudio Descriptivo y Correlacional

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Abstract

Background: Difficulties associated with in-hospital cardiopulmonary resuscitation may affect nurses' performance and compromise the survival of patients experiencing cardiac arrest.

Objective: To analyze nurses' perceived difficulties regarding in-hospital cardiopulmonary resuscitation at a hospital in northern Portugal.

Methodology: A quantitative, descriptive, correlational, and cross-sectional study was conducted with 201 nurses. Data were collected using a questionnaire designed to characterize participants' sociodemographic and professional characteristics and to assess nurses' perceived difficulties regarding in-hospital cardiopulmonary resuscitation.

Results: Nurses reported moderate-to-low perceived difficulty across the dimensions of in-hospital cardiopulmonary resuscitation. Statistically significant differences in perceived difficulty were observed by length of professional experience ($p = .029$), department of practice ($p < 0.001$), professional category ($p = 0.019$), and training in advanced life support ($p < 0.001$).

Conclusion: This study contributes to a better understanding of the difficulties nurses face during in-hospital cardiopulmonary resuscitation and highlights the need for ongoing cardiopulmonary resuscitation training and institutional improvement strategies to optimize in-hospital cardiopulmonary resuscitation care.

Keywords: nurses; cardiopulmonary resuscitation; hospital care; perception

Resumo

Enquadramento: As dificuldades na reanimação cardiopulmonar intra-hospitalar (RCP-IH) condicionam a atuação dos enfermeiros, com impacto na sobrevivência da vítima de paragem cardiorrespiratória (PCR).

Objetivo: Analisar as dificuldades percecionadas pelos enfermeiros de um hospital do norte de Portugal na RCP-IH.

Metodologia: Estudo quantitativo, descritivo, correlacional e transversal, no qual participaram 201 enfermeiros. Dados recolhidos através de um questionário de caracterização sociodemográfica, profissional e de avaliação das dificuldades percecionadas pelos enfermeiros.

Resultados: Os enfermeiros percecionaram níveis de dificuldade moderados a baixos nos diferentes fatores da RCP-IH. Evidenciaram-se diferenças estatisticamente significativas nas dificuldades percecionadas pelos enfermeiros em função do tempo de experiência profissional ($p = 0,029$), do serviço de onde exercem funções ($p < 0,001$), da situação profissional ($p = 0,019$) e da formação em suporte avançado de vida ($p < 0,001$).

Conclusão: O presente estudo contribui para uma melhor compreensão das dificuldades dos enfermeiros na RCP-IH e salienta a importância de investir na formação contínua em RCP e em estratégias de melhoria com foco na otimização da prestação de cuidados na RCP-IH.

Palavras-chave: enfermeiros; reanimação cardiopulmonar; assistência hospitalar; percepção

Resumen

Marco contextual: Las dificultades en la reanimación cardiopulmonar intrahospitalaria (RCP-IH) pueden condicionar la actuación del personal de enfermería, lo que repercute en la supervivencia de las víctimas de una parada cardiorrespiratoria (PCR).

Objetivo: Analizar las dificultades percibidas por el personal de enfermería de un hospital del norte de Portugal en la RCP-IH.

Metodología: Estudio cuantitativo, descriptivo, correlacional y transversal en el que participaron 201 enfermeros. Los datos se recopilaron mediante un cuestionario sobre características sociodemográficas y profesionales, así como sobre la evaluación de las dificultades percibidas por los enfermeros.

Resultados: Los enfermeros percibieron niveles de dificultad entre moderados y bajos en las diferentes dimensiones de la RCP-IH. Se observaron diferencias estadísticamente significativas en las dificultades percibidas por los enfermeros en función del tiempo de experiencia profesional ($p = 0,029$), del servicio de donde ejercen funciones ($p < 0,001$), de la situación profesional ($p = 0,019$) y de la formación en soporte vital avanzado ($p < 0,001$).

Conclusión: El presente estudio contribuye a comprender mejor las dificultades a las que se enfrentan los enfermeros en la RCP-IH y destaca la importancia de invertir en la formación continua en RCP y en estrategias de mejora centradas en la optimización de la prestación de cuidados en la RCP-IH.

Palabras clave: enfermeros; reanimación cardiopulmonar; atención hospitalaria; percepción

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Introduction

Cardiac arrest (CA) is the most severe and urgent medical emergency (Santos et al., 2023), requiring a safe, immediate, and complex response (Instituto Nacional de Emergência Médica [INEM], 2023). However, this level of response is not always achieved by healthcare professionals, who often struggle to implement it. The difficulties that limit a safe and high-quality response to victims of in-hospital cardiac arrest (IHCA) constitute a relevant and timely topic in the current context of care provided to critically ill patients. Therefore, it is important to explore these difficulties in order to obtain valid information that may support the implementation of strategies to improve care for these patients and provide a basis for future research. The present study aims to analyze the difficulties perceived by nurses at a hospital in northern Portugal regarding in-hospital cardiopulmonary resuscitation (IHCPR). The following specific objectives were also defined: to assess the level of difficulties perceived by nurses at a hospital in northern Portugal regarding IHCPR and to analyze the difficulties perceived by nurses according to their professional characteristics, namely length of professional experience, department of practice, professional category, and training in basic life support (BLS) and/or advanced life support (ALS).

Background

CA is defined as the sudden cessation of cardiac and respiratory function and may lead to irreversible neurological damage or death if the patient does not receive prompt treatment (Ramos et al., 2024). In the hospital setting, CA has an incidence of 1.5 per 1,000 hospitalized patients, and the probability of return of spontaneous circulation ranges from 36% to 54%. Among these patients, only 25% survive the first year after IHCA (Grasner et al., 2021; INEM, 2023).

IHCPR is a systematic approach to assessment and prioritized intervention aimed at preventing CA and, when it occurs, improving the patient's chances of survival (INEM, 2023). This approach is based on the in-hospital chain of survival (Vo et al., 2024), in which nurses play a critical role in both identifying clinical deterioration and responding rapidly to CA. This role includes the early recognition of CA, prompt activation of the in-hospital medical emergency team (MET), initiation of basic cardiopulmonary resuscitation (CPR) maneuvers, progression to advanced CPR when appropriate resources become available, and the provision of post-resuscitation care when indicated (Ramos et al., 2024).

However, nurses experience difficulties in IHCPR, characterized by perceived needs and performance limitations that may compromise patient survival (Catalão & Gaspar, 2017). The literature identifies difficulties associated with lack of experience and insufficient knowledge regarding techniques, algorithms, and material resources (Barros et al., 2024; Rabello et al., 2022; Ramos et al., 2024), as well as organizational and structural factors, including

the level of patient monitoring, ward layout, delayed availability of equipment and/or medications, inadequate staffing and team coordination, and response systems that delay care for victims of IHCA (Amoako-Mensah et al., 2023; Rabello et al., 2022; Ramos et al., 2024). Furthermore, the inherently stressful nature of CA may lead nurses to experience doubt, insecurity, and anxiety, which may hinder performance and increase the risk of errors (Amoako-Mensah et al., 2023; Barros et al., 2024; Ramos et al., 2024). To promote a culture of quality and safety in the care provided to victims of IHCA, healthcare institutions must understand and address the needs and limitations perceived by professionals that hinder IHCPR and adapt strategies to improve the quality of care delivered (Leandro et al., 2024).

Research questions

What is the perceived level of difficulty among nurses at a hospital in northern Portugal regarding IHCPR?

How do the difficulties perceived by nurses regarding IHCPR vary according to their professional characteristics, namely length of professional experience, department of practice, professional category, and training in BLS and/or ALS?

Methodology

This was a quantitative, descriptive, correlational, and cross-sectional study. A non-probability convenience sample was recruited from nurses working in several departments of a hospital in northern Portugal, including the emergency department, the intensive care unit, the cardiology intensive care unit and inpatient ward, the intermediate care unit, the operating room, the internal medicine inpatient ward, and the surgical/orthopedic inpatient ward. Participation was voluntary, anonymous, free, and informed. Nurses without previous experience in caring for patients with IHCA were excluded.

Data collection was conducted in accordance with the institution's internal procedures through institutional email between December 2024 and February 2025.

The data collection instrument consisted of a two-part questionnaire survey: Part 1 collected participants' sociodemographic and professional data (sex, age, length of professional experience, department of practice, professional category, and training in BLS and/or ALS; Part 2 assessed perceived difficulties in IHCPR using the In-Hospital CPR Difficulty Perception Scale (EPDAPI), developed by Catalão and Gaspar (2017).

The EPDAPI consists of five factors (CPR Performance; Competence in CPR Decision-Making; Timely Response to CA; Detection, Alert, and Response to CA; and Activation of Advanced CA Response), validated through exploratory factor analysis by the original authors (Catalão & Gaspar, 2017). The original factor structure of the EPDAPI was maintained to enable comparison of the findings with the existing literature.

In the present study, internal consistency analysis demonstrated satisfactory Cronbach's alpha values for all scale factors, with high reliability observed for the overall scale ($\alpha = 0.93$).

For interpretation of the results, EPDAPI scores range from 1 to 5, with values closer to 1 indicating a higher degree of perceived difficulty and values closer to 5 indicating a lower degree of perceived difficulty.

Data were analyzed using IBM SPSS Statistics (Version 26.0) through descriptive and inferential statistical methods. The significance level was set at 5%.

Formal ethical and legal considerations related to the research process were safeguarded, and the study received a favorable opinion from the Ethics Committee of the Local Health Unit (ULS) where the study was conducted (Reference No. 139/2024-CAF).

This study was reported in accordance with the STROBE guidelines (Strengthening the Reporting of Observational Studies in Epidemiology; Elm et al., 2007), and the corresponding STROBE checklist was used during the review process (Elm et al., 2025).

This study analyzed a sample of 201 nurses from a hospital in northern Portugal. Most participants were women (74.1%), aged between 30 and 49 years (79.6%), without a nursing specialty or management role (78.1%), and had more than 11 years of professional experience (64.7%). The departments with the highest representation were the emergency department, the internal medicine inpatient ward, and the surgical/orthopedic inpatient ward, which together accounted for 68.1% of the participants. Most nurses had training in BLS (98.0%) and ALS (60.7%). Regarding the descriptive results for the EPDAPI factors, the overall scale had a mean of 4.07 ($SD = 0.56$) and a median of 4.09. The factor associated with the lowest perceived difficulty was Timely Response to CA ($M = 4.56$, $SD = 0.61$), followed by Activation of Advanced CA Response ($M = 4.51$; $SD = 0.57$) and Competence in CPR Decision-Making ($M = 4.18$; $SD = 0.60$). In contrast, the CPR Performance factor presented the lowest mean score ($M = 3.32$; $SD = 0.83$) and a median of 3.38. Overall, these findings indicate a perception of moderate-to-low difficulty across the different domains of IHCPR care (Table 1).

Results

Table 1

Median, mean, and standard deviation of EPDAPI factors and total score

	<i>Md</i>	<i>M</i>	<i>SD</i>
CPR Performance	3.38	3.32	0.83
Competence in CPR Decision-Making	4.30	4.18	0.60
Timely Response to CA	4.80	4.56	0.61
Detection, Alert, and Response to CA	4.33	4.14	0.73
Activation of Advanced CA Response	4.75	4.51	0.57
Total EPDAPI	4.09	4.07	0.56

Note: *Md* = Median; *M* = Mean; *SD* = Standard deviation; EPDAPI = In-Hospital CPR Difficulty Perception Scale; CPR = Cardiopulmonary resuscitation; CA = Cardiac arrest.

To assess whether perceived difficulties in IHCPR differed by length of professional experience, the Kruskal-Wallis test was used because the assumption of normality for the dependent variable, assessed using the Shapiro-Wilk test, was not met. Statistically significant differences were found for Competence in CPR Decision-Making ($p =$

.030), Activation of Advanced CA Response ($p = .025$), and the total scale score ($p = .029$). Nurses with 6 to 10 years of professional experience perceived greater difficulties than those with 16 to 20 years of professional experience (Table 2).

Table 2*Results of the comparative tests on perceived difficulties in IH CPR, according to length of professional experience*

	Length of professional experience					KWt (p)
	0 to 5 years	6 to 10 years	11 to 15 years	16 to 20 years	21 or more years	
CPR Performance	3.19 ± 0.78	3.13 ± 0.79	3.33 ± 0.78	3.44 ± 0.91	3.49 ± 0.86	6.44 (0.168)
Competence in CPR Decision-Making	4.07 ± 0.48	3.99 ± 0.69	4.20 ± 0.52	4.36 ± 0.57	4.24 ± 0.64	10.69 (0.030*)
Timely Response to CA	4.50 ± 0.54	4.41 ± 0.78	4.57 ± 0.56	4.63 ± 0.57	4.68 ± 0.51	6.46 (0.167)
Detection, Alert, and Response to CA	4.12 ± 0.63	3.90 ± 0.88	4.10 ± 0.72	4.33 ± 0.65	4.27 ± 0.65	7.37 (0.118)
Activation of Advanced CA Response	4.59 ± 0.39	4.33 ± 0.72	4.43 ± 0.58	4.69 ± 0.44	4.53 ± 0.56	11.13 (0.025*)
Total EPD API	3.99 ± 0.49	3.87 ± 0.61	4.07 ± 0.56	4.21 ± 0.56	4.18 ± 0.52	10.80 (0.029*)

Note: KWt = Kruskal-Wallis test; (p)* Significant at 0.05; CPR = Cardiopulmonary resuscitation; CA = Cardiac arrest; EPD API = In-Hospital CPR Difficulty Perception Scale.

To assess whether statistically significant differences in perceived difficulties with IH CPR existed by department, the Kruskal-Wallis test was used again because the assumption of normality, assessed using the Shapiro-Wilk test, was not met. Statistically significant differences were identified across all factors and in the total scale score. Therefore, multiple comparisons were conducted to determine which departments differed in the difficulties nurses perceived in performing IH CPR. Regarding the total score on the EPD API scale, nurses working in the internal medicine inpatient ward ($M = 3.61 \pm 0.40$) and

the surgical/orthopedic inpatient ward ($M = 3.61 \pm 0.49$) perceived greater difficulties than nurses working in the emergency department ($M = 4.34 \pm 0.40$), the intensive care unit ($M = 4.63 \pm 0.28$), the intermediate care unit ($M = 4.13 \pm 0.34$), and the cardiology intensive care unit and inpatient ward ($M = 4.49 \pm 0.35$). Lower mean scores were observed in the former groups. In addition, nurses working in the operating room ($M = 3.92 \pm 0.73$) and the intermediate care unit ($M = 4.13 \pm 0.34$) also perceived greater difficulties than nurses working in the intensive care unit ($M = 4.63 \pm 0.28$; Table 3).

Table 3*Results of the comparative tests on perceived difficulties in IH CPR according to department of practice*

	Department of Practice							KWt (<i>p</i>)
	Internal Medicine Inpatient Ward	Emergency Department	Surgical/Orthopedic Inpatient Ward	Intensive Care Unit	Operating Room	Intermediate Care Unit	Cardiology Intensive Care Unit and Inpatient Ward	
CPR Performance	2.67 ± 0.63	3.77 ± 0.62	2.77 ± 0.80	3.90 ± 0.53	3.23 ± 0.94	3.05 ± 0.55	4.13 ± 0.46	80.38 (<i>< 0.001*</i>)
Competence in CPR Decision-Making	3.83 ± 0.95	4.34 ± 0.50	4.01 ± 0.56	4.72 ± 0.27	4.01 ± 0.81	4.11 ± 0.55	4.37 ± 0.51	40.57 (<i>< 0.001*</i>)
Timely Response to CA	4.11 ± 0.54	4.81 ± 0.31	3.91 ± 0.53	4.95 ± 0.11	4.64 ± 1.01	4.94 ± 0.11	4.92 ± 0.19	105.55 (<i>< 0.001**</i>)
Detection, Alert, and Response to CA	3.62 ± 0.74	4.37 ± 0.48	3.37 ± 0.50	4.89 ± 0.26	4.14 ± 0.87	4.63 ± 0.28	4.63 ± 0.38	96.50 (<i>< 0.001**</i>)
Activation of Advanced CA Response	4.39 ± 0.57	4.62 ± 0.45	4.33 ± 0.57	4.79 ± 0.31	3.92 ± 0.99	4.65 ± 0.36	4.80 ± 0.31	25.64 (<i>< 0.001**</i>)
Total EPD API	3.61 ± 0.40	4.34 ± 0.40	3.61 ± 0.49	4.63 ± 0.28	3.92 ± 0.73	4.13 ± 0.34	4.49 ± 0.35	90.02 (<i>< 0.001**</i>)

Note: KWt = Kruskal-Wallis test; (*p*)** Significant at 0.01; CPR = Cardiopulmonary resuscitation; CA = Cardiac arrest; EPD API = In-Hospital CPR Difficulty Perception Scale.

To assess whether statistically significant differences existed in perceived difficulties with IH CPR by professional category, Student's t-test was used. General nurses reported greater difficulties than nurse specialists in CPR Performance (*p* = 0.039), Competence in CPR Decision-Making (*p* = 0.005), and the total EPD API score (STt = -2.37; *p* = 0.019; Table 4). Nurses in management or supervisory positions were excluded because of the insufficient sample size (*n* = 3).

Student's t-test also identified statistically significant differences in perceived difficulties in IH CPR across participants with ALS training. Because 98.0% of participants had BLS training, this variable was excluded from the inferential analysis due to insufficient variability, and only ALS training was analyzed. Nurses without ALS training perceived greater difficulties than those with ALS training across all factors (*p* < 0.001) and on the total EPD API score (STt = 10.02; *p* < 0.001; Table 4).

Table 4*Results of the comparative tests on perceived difficulties in IH CPR according to professional category and ALS training*

	Professional Category			ALS Training		
	General Nurse	Nurse Specialist	STt (<i>p</i>)	Yes	No	STt (<i>p</i>)
CPR Performance	3.24 ± 0.78	3.53 ± 0.93	-2.08 (0.039*)	3.72 ± 0.68	2.72 ± 0.65	10.31 (<i>< 0.001**</i>)
Competence in CPR Decision-Making	4.11 ± 0.60	4.39 ± 0.52	-2.86 (0.005**)	4.40 ± 0.49	3.85 ± 0.59	7.25 (<i>< 0.001**</i>)
Timely Response to CA	4.55 ± 0.63	4.63 ± 0.51	-0.80 (0.423)	4.76 ± 0.41	4.26 ± 0.72	5.56 (<i>< 0.001**</i>)
Detection, Alert, and Response to CA	4.13 ± 0.73	4.21 ± 0.75	-0.60 (0.551)	4.38 ± 0.60	3.79 ± 0.77	5.84 (<i>< 0.001**</i>)
Activation of Advanced CA Response	4.47 ± 0.57	4.61 ± 0.57	-1.46 (0.146)	4.63 ± 0.46	4.32 ± 0.67	3.61 (<i>< 0.001*</i>)
Total EPD API	4.01 ± 0.55	4.23 ± 0.57	-2.37 (0.019*)	4.33 ± 0.44	3.67 ± 0.49	10.02 (<i>< 0.001**</i>)

Note: STt = Student's t-test; (*p*) * Significant at 0.05; ** Significant at 0.01; IH CPR = In-hospital cardiopulmonary resuscitation; ALS = advanced life support; CPR = Cardiopulmonary resuscitation; CA = Cardiac arrest; EPD API = In-Hospital CPR Difficulty Perception Scale.

Discussion

Studies in the field of CPR have identified challenges across multiple dimensions of IH CPR (Amoako-Mensah et al., 2023; Barros et al., 2024; Catalão & Gaspar, 2017; Santos et al., 2024), as also demonstrated in the present study.

The mean EPD API score in the present study was higher than that reported by Catalão and Gaspar (2017; 4.07 vs. 3.50), indicating lower perceived difficulty among the participants in this study. This difference may reflect disparities in the systems implemented to respond to CA, particularly in the activation of advanced response systems. Amoako-Mensah et al. (2023), Mbuthia et al. (2024), and Hamal et al. (2025) reported that inappropriate response systems or insufficient professional knowledge of these systems may delay responses to patients experiencing CA, thereby compromising survival outcomes.

Analysis of the EPD API factors revealed that nurses perceived moderate-to-low levels of difficulty in IH CPR, with Timely Response to CA identified as the least difficult factor, followed by Activation of Advanced CA Response. These findings suggest that nurses trust the institutionally implemented CA response systems and recognize the availability of resources, although not always optimal, that enable rapid response to patients experiencing CA. In contrast, the CPR Performance factor had the lowest mean score and, consequently, the greatest perceived difficulty. Difficulties related to indecision or hesitation in responding indicate a moderate level of difficulty with knowledge of guidelines, procedures, medications, and materials used in CPR. This issue deserves particular attention, as knowledge deficits are associated with poorer CPR practices, as demonstrated by Guteta (2022) and Tomas and Kachekele (2023).

The findings of the present study also indicate that nurses with fewer years of professional experience perceived greater difficulties in caring for patients with IHCA. These results are consistent with the studies by Alaseeri et al. (2021) and Guteta (2022), which demonstrated that greater professional experience is associated with more effective decision-making and safer CPR practices, respectively. This pattern may reflect greater exposure to CA events over time, providing opportunities to consolidate and develop CPR-related skills. In contrast, Citolino Filho et al. (2015) concluded that the length of professional experience did not influence nurses' perceptions of factors hindering the quality of CPR. This discrepancy may be explained by differences in sample size between the studies. It was also observed that nurses working in non-critical care units, particularly the internal medicine and surgical/orthopedic inpatient wards, perceived greater difficulties than nurses working in critical care settings, namely the intensive care unit, the intermediate care unit, the cardiology intensive care unit and inpatient ward, and the emergency department, across all IH CPR-related factors. These findings are consistent with the study by Catalão and Gaspar (2017) and may be explained, first, by differences in patient monitoring. Inadequate or absent monitoring, especially in non-critical care settings, may

hinder the recognition of physiological deterioration or CA and delay the activation of advanced response systems and the timely delivery of care (Catalão & Gaspar, 2017; Grasner et al., 2021; Mbuthia et al., 2024). Second, the higher incidence of CA events in critical care units (Hamal et al., 2025), resulting from the clinical instability characteristic of these patients, exposes nurses in these settings to situations requiring a safe and timely CPR response more frequently (Guteta, 2022).

Furthermore, the fact that the ULS where this study was conducted primarily provides ALS training to nurses working in critical care units, rather than in non-critical care settings, may also explain these findings. This interpretation is reinforced by statistically significant differences among critical care units, with nurses in the intensive care unit reporting fewer difficulties in the overall context of IH CPR than nurses in the operating room and the intermediate care unit. These latter settings also had fewer nurse specialists and fewer nurses with ALS training.

Nurse specialists reported fewer difficulties than general nurses across the overall scale, particularly in CPR Performance and Competence in CPR Decision-Making. These findings may reflect nurse specialists' ability to integrate scientific evidence into clinical practice and apply evidence-based decision-making. Furthermore, compared with general nurses, nurse specialists reported fewer difficulties with CPR knowledge and decision-making. These findings are corroborated by Santos et al. (2024), who demonstrated that nurse specialists possess greater CPR-related knowledge than general nurses, thereby reinforcing the importance of nursing specialization.

In the present study, nurses with ALS training reported fewer difficulties across all IH CPR factors than nurses without such training. These findings are consistent with Catalão and Gaspar (2017) and are further supported by Mroczinski et al. (2023) and Khattab et al. (2025), who highlighted the positive impact of CPR training on nurses' theoretical and practical knowledge and on mortality outcomes. However, the literature consistently demonstrates that CPR knowledge and practical skills deteriorate over time (Hsieh et al., 2025). This pattern is also reflected in the present study, particularly regarding CPR Performance, which showed the lowest mean score despite the high proportion of nurses trained in BLS and ALS. These findings support the need to strengthen regular training strategies tailored to the needs and difficulties identified by healthcare professionals.

This study has several limitations that should be considered when interpreting the findings. Although the sample included nurses from different care settings and with varying levels of professional experience, thereby increasing its diversity, the use of convenience sampling warrants caution when generalizing the findings to other clinical contexts. In addition, the limited number of studies specifically addressing the difficulties experienced by nurses in IH CPR restricted the scope of the discussion. Further research in this field is therefore needed, with the EPD API representing a potentially valuable instrument for addressing this research gap. Moreover, the

cross-sectional design does not allow causal inferences to be drawn; therefore, longitudinal studies are recommended. Finally, the study did not analyze differences across nursing specialties, and future studies should explore whether perceived difficulties vary by specialty and how these differences may influence patient care.

Conclusion

Nurses perceived moderate-to-low levels of difficulty across the different dimensions of IH CPR. These perceived difficulties varied by nurses' length of professional experience, department of practice, professional category, and ALS training.

This study contributes to a better understanding of the difficulties nurses face when caring for IHCA victims. It highlights the need for training strategies that provide practical CPR experience and are tailored to nurses' perceived needs, challenges, and professional characteristics. Based on these findings, it is recommended, as part of a continuous institutional quality improvement strategy, that a multidisciplinary working group be established to promote coordination among hospital departments, to optimize the response to patients experiencing IHCA through both professional training initiatives and improvements in institutional response systems.

It is expected that this study will contribute to research in the field of IH CPR by supporting the development of more robust evidence-based guidelines and encouraging future studies that explore, in greater depth, additional factors influencing nurses' perceived difficulties in IH-CPR, as well as longitudinal approaches that may clarify causal relationships.

Author contributions

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Thesis/Dissertation

This article is derived from a master's thesis titled *Dificuldades percebidas pelos enfermeiros na reanimação cardiopulmonar intra-hospitalar: Um estudo descritivo e correlacional*, submitted to the School of Health at the Polytechnic Institute of Bragança in 2025.

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