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Palliative care nurses' perspectives on managing a disaster situation: a focus group study

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Abstract

Background Nurses who provide palliative care play a fundamental role in delivering and managing care for victims of disasters and public health emergencies. However, in these contexts, the role of palliative care remains a low priority. This study aimed to explore the perspectives of specialist nurses from a hospital palliative care unit regarding the management of a large-scale fire, which led to the evacuation and complete deactivation of a central hospital.

Methods This qualitative, descriptive, and exploratory study used content analysis of data collected through a focus group. The focus group consisted of specialist nurses with advanced training in palliative care from a hospital palliative care unit who had experienced a disaster situation.

Results The participants identified six domains of nursing expertise essential for managing the crisis: preparation and planning, communication, safety and protection, intervention, assessment and recovery, and law and ethics. The identification of needs and challenges related to nursing expertise in palliative care was also considered crucial for a more effective response in disaster contexts.

Conclusions The findings highlighted that the expertise of specialist palliative care nurses is vital in responding to disasters, as they play a key role in alleviating the suffering of individuals affected by such events. Teamwork, leadership, and the training of nurses in palliative care were identified as critical elements for the effective management of disaster situations. The integration and contribution of palliative care nurses in the development of policies, planning, and disaster response are essential for future situations, regardless of the context.

Keywords Palliative care, Disaster, Nursing care

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Background

In recent years, the increasing frequency of disasters and public health emergencies, driven by both natural and human-made causes, along with rising vulnerability, has become a major public health concern [1]. In 2023, disasters resulted in 86,473 deaths and affected 93.1 million people, with economic losses totaling US$ 202.7 billion [2]. A disaster is defined as a significant event or series of events that cause substantial material damage and potential victims, severely impacting living conditions and the socioeconomic fabric in specific areas or across the entire national territory [3]. While these disasters affect everyone, they are especially devastating for people with life-limiting illnesses and injuries, including palliative care patients, who are already vulnerable [4]. Palliative care aims to prevent and alleviate suffering through early identification, accurate assessment, and treatment of pain and other physical, psychosocial, or spiritual issues [5]. It is required in various contexts and at all levels of care, both for chronic situations and life-threatening emergencies [6]. Despite its importance, palliative care is often a lower priority during disasters [7, 8], with limited research [9] and insufficient training for many nurses [10, 11].

During a disaster or public health emergency, palliative care nurses may not only need to continue providing care for existing patients but also extend their care to new patients, alleviating the suffering of those affected by such events [12, 13]. Addressing health disparities and ensuring the equitable distribution of quality palliative care during disaster and public health emergencies is a key responsibility for palliative care nurses [12].

This study aimed to allow palliative care specialist nurses involved in a disaster situation to share what they considered crucial in managing a fire that occurred in a central hospital in the Azores. The Azores, like other island and outermost regions, are particularly vulnerable to both natural and man-made disasters. Due to their unique geological and geographical characteristics, they are prone to certain types of severe accidents and disasters, which present challenges in terms of resources and response capabilities needed to reduce their vulnerabilities.

In the post-disaster context, it is essential to analyze the emerging issues and challenges, encouraging nurses to seek resources and conduct research to improve planning and management for healthcare responses to such events [8, 14].

The study highlights the need for involving palliative care nurses in the planning and effective response to disaster situations, thus enhancing the capacity of healthcare teams to respond effectively and minimizing the suffering of patients and families involved.

Objective

The objective of this study was to explore the perspectives of specialist nurses from a hospital palliative care unit regarding the management of a large-scale fire, which led to the evacuation and complete deactivation of a central hospital. The research question was formulated as follows: What are the perspectives of palliative care specialist nurses on managing a disaster situation?

Methods

Design

This was a qualitative, exploratory, and descriptive study conducted using a focus group, in accordance with the recommendations of Krueger and Casey [15]. The use of a focus group was chosen based on the research's objective, as this method encourages group interaction that allows participants to explore, clarify, and share individual perspectives. This interaction facilitated data collection on the subject under study [15]. The study adhered to the Consolidated Criteria for Reporting Qualitative Research (COREQ) [16]. An inductive approach was used, and content analysis of the transcriptions was performed.

Participant selection

Participants were recruited in person by the principal investigator 2 to 3 weeks prior to the focus group meeting. They were provided with detailed information about the study and the research team's interest in the topic [15]. Participants were informed that there would be no financial compensation for their participation, but their involvement was emphasized as important for improving disaster response and nursing care. The inclusion criteria for participants were as follows: (i) having experienced the fire situation in a Portuguese hospital; (ii) being specialist nurses; (iii) working in palliative care; and (iv) having advanced training in palliative care. These criteria were essential, as participants needed to possess the specialized expertise required for complex interventions in palliative care. Exclusion criteria included: (i) nurses without a nursing specialty and (ii) nurses who did not participate in the response to the fire situation. The focus group ideally consisted of 5 to 8 participants [15], and 25% more were recruited to account for potential non-acceptance [17]. All 8 potential participants agreed to take part, and informed consent was obtained in advance. The meeting was scheduled based on the availability of all participants. The focus group took place online via the Teams® platform, with only the two researchers and the 8 participants present. Confidentiality of communication and information was ensured [15].

Data collection

Data were collected in Portuguese, the native language of all participants and researchers. A question guide was developed in advance based on the study's objectives and research question [18]. Additionally, a focus group script was created, structured as follows: (i) introduction of the study; (ii) introduction of the research team; (iii) presentation of the meeting's objectives; (iv) clarification of any doubts; (v) recognition and appreciation for the participants' availability; (vi) explanation of how the meeting would proceed; and (vii) confirmation of consent for audio recording via the Teams® platform. To encourage discussion, open-ended questions were initially posed, followed by more focused questions, while maintaining objectivity [15]. The questions were grouped into three categories: (i) involvement questions, such as: "Would you like to briefly introduce yourself?"; (ii) factual questions about the event, such as: "Can you describe what happened during the fire?"; and (iii) exploratory questions, such as: "What priorities were established during the patient evacuation process?" "How did you manage patient care during the evacuation?" "What were the main challenges of this situation?" or "What lessons did you learn from this situation?"

The focus group meeting was held in October 2024, led by the principal investigator, with another researcher acting as an observer and responsible for field notes. Both researchers were trained in conducting and analyzing focus group studies. The meeting ended when researchers found that participants had no new information to disclose. The meeting lasted 125 min, which was 35 min longer than the duration recommended by Krueger and Casey [15], but this did not affect the quality of the data collected. Participants remained actively engaged throughout the session without showing signs of fatigue. The meeting was audio-recorded to ensure the reliability of the data analysis. The recordings were transcribed using Teams®, with participants identified using codes from P1 to P8. After transcription, the texts were returned to the participants for comments, suggestions, and/or corrections. No changes or suggestions for improvement were provided by the participants.

Data analysis

The analysis of the data collected was organized into three stages: (i) coding, which involved assigning subcategories, categories, and themes after multiple readings of the transcriptions, reflecting predefined themes from the guide or emerging ones; (ii) storage, which entailed compiling text excerpts linked to each subcategory and category; and (iii) interpretation and content analysis of the data [19]. An inductive content analysis was performed due to the limited research available on the perspectives of palliative care nurses regarding the management of disaster situations [20]. For content analysis, MAXQDA®24 software was used for detailed qualitative coding, including organizing, grouping, and comparing codes, as well as visualizing textual patterns. Additionally, Microsoft Excel® was employed to complement the data organization and conduct frequency analysis. The content analysis was performed by three researchers (MM, ML, and DP). The researchers independently read the verbatim transcriptions multiple times to fully understand the content. Open coding was conducted during these readings, and the initial codes were grouped into subcategories. In the subsequent abstraction process, these subcategories were consolidated into categories based on similarities and further grouped into main themes [21]. The researchers reorganized the subcategories according to their relationships, consolidating them into a smaller number of organizational categories. Defining the categories was a dynamic process that involved moving back and forth between specific and general perspectives. These categories were developed through discussions among the researchers. Notes were kept enhancing the reliability of the analysis. To ensure accuracy, two external researchers (AC and AO) reviewed the analysis. The results were primarily presented in tables with narrative descriptions, including illustrative quotes while omitting any identifying details to maintain confidentiality.

Rigor

The methodological rigor of the study was based on the following criteria from Lincoln and Guba [21, 22]: Acceptability, equivalent to internal validity, Transferability, equivalent to external validity, Similarity, equivalent to reliability, and Verifiability, equivalent to objectivity. The study's credibility was ensured by collecting data from a group of participants who had shared the same experience, verifying the transcription of the focus group, and extracting primary codes to check the accuracy of the participants' experiences. External supervision was applied to ensure compliance with the internal consistency criterion. To do this, the data were reviewed by two researchers who had not participated in the study. If there was agreement in the interpretation of the data, internal consistency was confirmed. The transferability of the results was ensured through the sampling strategy, which selected participants with direct experience of the situation, and through a detailed description of the study context and the participants' experiences. All stages and processes of the research were meticulously recorded to allow for auditing by external supervisors and to evaluate the credibility of the findings.

Table 1 Characterization of the participants

Variables		*n*	%	Years
Sex	Female	6	75	
	Male	2	25	
Academic Degree	Bachelor's Degree	4	50	
	Master	4	50	
Age	Average			38
	Maximum			41
	Minimum			31
Work experience	Average			15
	Maximum			19
	Minimum			5
Work experience in palliative care	Average			7,9
	Maximum			10
	Minimum			5

Table 2 Themes, categories, and subcategories

Themes	Categories	Subcategories
1. Nursing expertise in disaster management	Preparation and planning	Perception of gravity and preparedness
		Preparation for evacuation
	Communication	Communication
	Safety and protection	Safety and protection
	Intervention	Crisis and loss management
		Symptom control and comfort
		Dignity and companionship
	Assessment and recovery	Organising and adapting infrastructures and resources
		Defining circuits and procedures
		Maintenance of activity
		Team support strategies
	Law and ethics	Law and ethics
2. Needs and challenges for palliative care nursing expertise	Determinants of effective management	Teamwork
		Leadership skills
		Training and education
	Integrating palliative care expertise into disaster response	Integrating palliative care skills into disaster response

Ethical considerations

All participants in the focus group were fully informed about the study, and written informed consent was obtained, including consent for audio recording. Participation in the study was entirely voluntary, and participants were made aware of their right to withdraw at any time without penalty. The research methodology was designed to ensure that no discriminatory practices or unfair treatment occurred. Participants were assured that all data collected would only be accessible to the research team and that their privacy and personal identity would be protected [15]. The principles of the Declaration of Helsinki [23] and the Oviedo Convention [24] for research involving human beings were strictly adhered to. The study was approved by the Ethics Committee for Health at the hospital under study.

Results

The sample consisted of 8 nurses, all specialists with advanced training in palliative care, and an average of 7.9 years of professional experience in the field. Half of the participants held a master's degree. Table 1 provides a detailed characterization of the participants.

Data analysis led to the emergence of 16 subcategories, 8 categories, and 2 themes (Table 2). The first theme, *Nursing Expertise Domains in Disaster Management*, included the following categories: (i) Preparation and planning; (ii) Communication; (iii) Safety and protection; (iv) Intervention; (v) Assessment and recovery; (vi) Law and ethics. The second theme, *Needs and Challenges to Nursing Expertise in Palliative Care*, included two additional categories: (i) Determinants for effective management; (ii) Integration of palliative care expertise in disaster response.

Theme 1 – Nursing expertise domains in disaster management

The findings in this theme highlight the participants' recognition of the key expertise domains and factors that influenced the effective management of the disaster situation.

Preparation and planning

In the context of the disaster situation, the participants demonstrated exceptional preparation and planning skills, underscored by their clear understanding of the situation's seriousness and the team's readiness to respond. Recognizing the severity of the situation was a key starting point for action. The participants clearly and objectively reported their awareness of the gravity of the situation: "I started to smell smoke. We began to consider the worst-case scenario. (…) We understood what was happening and what could happen." (P6). The team's readiness was another significant factor. Even before the evacuation was confirmed, the nurses proactively began preparations, showcasing a high level of organization and initiative. The rapid mobilization of the team stood out, as evidenced by the following statement: "I wrote the message on WhatsApp® and half an hour later, I had the whole team present. I believe the nurses showed a willingness to act quickly." (P7). Despite the evacuation not being immediately confirmed, the nurses began preparations in advance: "When I arrived at the unit, the patients were near the emergency door, and everything was very organized; my colleagues were already preparing the therapies." (P8). The preparation of medications and equipment was carried out swiftly and accurately: "I felt

that my colleagues already had defined tasks. I noticed that the patients' medications were prepared, they had replaced the infusion pumps with elastomeric pumps and prepared the urgent medications that would be needed." (P4). In addition to material preparation, the team also focused on compiling essential patient information, ensuring all necessary data was available in case of evacuation: "When dividing tasks, there was also concern with compiling possible information related to the patients and reference people." (P8). The level of organization was such that the participants described the process as almost standardized: "(…) there was almost an informal checklist to be followed." (P3). The efficiency in assigning tasks and responsibilities was crucial for the preparation's success: "It was very well organized in the sense that in a short time we were able to define the tasks and who was responsible for them. That was very good." (P7).

Communication

In emergency situations, effective communication is essential. Several participants emphasized that the team maintained clear internal communication: "(…) communication was successful for all of us." (P2); "The information always came through clearly– the instructions, circuits…" (P8). Tools like WhatsApp® facilitated quick and coordinated communication. When it came to patients and their families, open communication was prioritized to alleviate anxiety during the evacuation: "(…) the evacuation process occurred with the greatest tranquility, even against what could be expected, as a result of work that didn't just happen in the moment, it had been going on for a long, long time." (P6).

Safety and protection

The sense of safety perceived by the team was a vital component in managing the situation. One participant expressed, "When I entered the unit, I felt a great sense of security from the leadership and the colleagues who were on shift." (P4). The calmness of the patients and their families was particularly notable. Participants attributed this calm to the way the situation was managed by the team: "On the side of the patients and families, no anxiety was felt, even with all the commotion. There was great collaboration, respect, and understanding with the professionals and among themselves. I think this was also a result of how the situation was managed by the team." (P7). The team prioritized sharing relevant information while simultaneously conveying a sense of safety and confidence: "There was open communication, no information was hidden, but we also showed with confidence that we had a plan and that the patients would be our priority." (P6). Trust, built over time between the team and the patients/families, played a critical role in managing the situation. One participant shared: "I never imagined that, in a moment of catastrophe, the relatives and the patients would be as calm as they were. It was the trust that the team showed in the moment, but also over the years, that made the patients and families trust us. Despite the sadness of the situation, that's very beautiful—to understand that people trust the team completely." (P3).

Intervention

The interventions implemented were deeply rooted in the core philosophy of palliative care, focusing on the needs of patients and their families, while considering the available resources in response to the disaster. The nurses' experience in managing crises and loss in palliative care enabled a more effective response: "It's part of our work philosophy, every day, to prepare for the worst, while hoping for the best." (P6). In the clinical context, constant attention was given to symptom control and comfort, reflected in various actions taken by the team: "For one of the patients who was evacuated, we were concerned about administering a preventive SOS because the evacuation was done by hand." (P1). "For a patient with a history of dyspnea and on oxygen, we took care to administer an SOS beforehand for dyspnea…" (P5). "We managed to maintain comfort throughout the entire evacuation process, and even when we reached the meeting point, which was one of the most chaotic areas, there was a concern to provide comfort, dignity, and continuous support throughout the process." (P7). The nurses showed a deep concern for preserving dignity and offering emotional support throughout the process: "Evacuating the woman who had already passed away, I think that was unique. The family was never left alone, and the body was never left alone; we tried to make all our movements gentle and maintain good communication… especially since we had the family there experiencing all those emotions amidst the chaos." (P4). Privacy was also a key consideration: "Even though it was improvised, the family was with the patient (…). The patient passed away very peacefully, and post-mortem care was provided." (P1). "At the meeting point, patients were organized by service, and many patients were without team members from the service where they were hospitalized. However, with the palliative care patients, there was always a team member accompanying them." (P8). One nurse highlighted the importance of emotional support and management in such a large-scale event: "When I realized everything was organized, I tried to understand how the patients and families were experiencing this. I tried to reassure them, made some phone calls… ensuring that all the patients in the unit and all the families were being taken care of." (P4).

Assessment and recovery

Immediate actions were taken to minimize the disruption in care services following the evacuation. All participants noted the urgent need to organize and adapt the infrastructure and resources necessary for providing continuous care. One participant shared, "When we realized the evacuation was under control, we tried to anticipate what the next few days would be like with those patients, and it was clear that we would need a lot of resources. Staff was given time to rest because they would likely be needed later. All of this was to ensure continuity of care and avoid exhausting the team." (P1). Another participant highlighted the challenge: "The new space was a previously empty floor, now full of patients, but without resources. All the resources we considered essential in clinical service were not available. It was necessary to create a basic service immediately to meet the needs of the patients and professionals. The first week was very intense." (P7). In addition to securing physical resources, the team recognized the need to define new pathways and procedures adapted to the evolving disaster situation. "We quickly restructured; for example, infection prevention and control procedures, medication pathways…" (P7). Another participant remarked on the scale of logistical challenges: "It was understood that the logistics were enormous… for example, the simple act of asking the pharmacy for a pill." (P6). Despite the challenges, the team ensured continuity of care and gradually improved the situation: "There was continuity. Discharges were done hastily on the day of the event, so there was more concern about maintaining follow-up phone consultations, as it was already the team's usual procedure." (P7). "Due to the organization of human resources, we were able to resume some of the protocols of our unit, including contact for grief." (P4). "Compared to what we used to do before, in the hospital, it couldn't have been better." (P3). To maintain activity in this changed environment, the team was restructured, and strategies for supporting one another were integrated. "Not everyone was experiencing it the same way; some colleagues were facing very big difficulties. It was necessary to create a space, an opening for people to express what they were feeling." (P6). "In planning the care, including the 24-hour telephone support available, I tried to adjust the complexity to the experience, expertise, and emotional state of my colleagues." (P3). "There was a lot of mutual support and openness within the team to receive the difficulties of others." (P8).

Law and ethics

Access to adequate care was a major concern for the participants, who expressed a sense of helplessness in the face of potential limitations in emergency services and bed availability. One participant explained, "There was almost a feeling of helplessness on our part due to the possible lack of access to care. We knew that emergency services had limited capacity to respond, as well as the availability of beds, which were distributed across various receiving institutions. We also knew about the limitation of resources, and imagining what could happen in the event of a resource failure, such as a shortage of oxygen… These issues caused us some insecurity and concern." (P8). A significant challenge identified was the decrease in referrals for palliative care during the disaster period. Participants suggested that admission protocols needed to be adapted to emergency situations, given the high demand for care: "Perhaps in a disaster situation, it would be normal to admit more patients and even integrate into an emergency or internal medicine service for situations where the influx is higher and there are more deaths." (P7).

Theme 2 – Needs and challenges to palliative care nursing expertise

The participants highlighted both the key determinants for effective management by nurses in disaster situations and the importance of integrating palliative care nurses into disaster response efforts.

Determinants for effective management

Teamwork was consistently identified as a crucial factor for successful disaster management. Coordination and collaboration among team members were essential for ensuring a swift and efficient response: "All the team members had equally important roles, coordinated and executed in a timely manner." (P1). The team's prior experience in palliative care also contributed to the effectiveness of their teamwork: "This was the moment that most tested us as a team. I saw easy organization, the people knew each other very well, and fortunately, it seems we have a good working method. What we acquired over time in terms of strategies to improve teamwork culminated in this." (P6). Effective leadership was another key determinant in managing the disaster. Participants described the leadership as clear, well-structured, and highly organized: "What happened was a great mobilization of the team, very guided, very directed, very well-led." (P6). Leadership also stood out for its clear communication and decisive decision-making: "In addition to the coordination of the chief nurse with us, I also felt that in important moments, decisions were always conveyed in a concrete way, without uncertainty. When a decision was made, it was the decision. I don't know how it was worked out before we arrived, but when the chief came to talk to us, everything was already well-organized." (P3). Training in disaster management was recognized as important, though participants also pointed out limitations in the drills and courses they had attended. One participant reflected on a recent training experience:

"The last one I did was recent. One of the things I took away was the importance of communication, the ability to be the one to communicate and give clear and precise orders. I remember the fire drill we did, and I think it was an asset. (…) Now, without a doubt, after what we went through, we need to rethink the drills conducted in training. They did not prepare us at all for what we experienced." (P6). Practical experience in the work environment was considered more valuable than theoretical training: "Actually, those brief trainings helped identify the circuits, but in terms of functionality, organization, and communication, everything was developed in the work context, not in those courses." (P8).

Integration of palliative care expertise in disaster response

The capacity of palliative care nurses to respond effectively in disaster situations was highlighted as a crucial differentiating factor: "In a disaster, the palliative care nurse becomes deeply involved in providing an efficient response for the patients, the team, and the institution. This is what sets the nurse apart due to their training, care philosophy, and ability to address the multidimensional needs of patients and families. They are dedicated to making everything work, regardless of the complexity, working hours, or personal interests, and this is especially evident under pressure, in disaster situations like the one we experienced." (P7). Their care philosophy, which focuses on the patient and family, allows for a holistic and compassionate approach, even in the most challenging conditions. Maintaining high-quality care, regardless of the physical environment, was a key aspect appreciated by patients and their families: "The willingness to maintain the quality of our care, above all else, regardless of the physical space. Families consistently told us that, no matter where we were, we were able to provide quality care." (P5).

Discussion

This study aimed to understand the perceptions of palliative care nurses regarding the management of disaster situations. The findings focused on the expertise required by palliative care nurses and the challenges they face in applying their expertise for effective disaster management.

While the literature provides a comprehensive view of the cross-cutting expertise related to nursing roles in disaster situations [25, 26], there is limited research on palliative care responses in these scenarios, where providing or maintaining these services becomes particularly challenging [7, 27]. The findings of this study align with the domains of nursing expertise in disasters outlined by the International Council of Nurses [28], including (i) preparation and planning, (ii) communication, (iii) safety and protection, (iv) intervention, (v) evaluation and recovery, and (vi) law and ethics. However, these findings have been adapted to the specific context of palliative care.

In terms of preparation and planning, our study emphasized that a palliative care approach, along with the preparation inherent in the professionals' activities, was essential for successful management. This was particularly important in building relationships with patients and families, preparing both physically and mentally, and fostering teamwork in managing the situation. Crisis preparation is critical for ensuring a successful response in later stages of the crisis [29–31].

Communication is another key element in disaster response and is just as crucial in palliative care. The study found that communication played a central role in coordinating and ensuring continuity of palliative care. Participants emphasized the importance of listening to patients' and families' concerns, being honest, and keeping patients and families informed whenever possible. Additionally, effective communication within the intra- and interdisciplinary team is essential, and this is fostered by the core philosophy of palliative care [32].

The pre-existing relationship between the team and patients/families was crucial in ensuring trust during the disaster. Continuity of care with the same team over time enhances patient trust [33], which was noted by several participants. They reported that patients and families continued to trust the care team during the evacuation, reflecting the ability of the team to maintain safety and protection in the face of disaster. The coordinated response of the nurses helped prevent unsafe practices, which could have hindered the ability to provide care.

Regarding intervention, crisis management, and loss support, the experience of palliative care nurses enabled anticipatory planning, continuous emotional support, and grief interventions [34], as evidenced by a death that occurred during the evacuation. In terms of symptom control, the findings revealed that nurses were effective not only in managing physical symptoms but also in supporting the emotional and psychological well-being of both patients and families. The study highlighted the importance of a multidimensional approach, incorporating both pharmacological and non-pharmacological strategies to manage prevalent symptoms such as pain, dyspnea, and anxiety [35]. Beyond managing physical symptoms, palliative care nurses also provided psychological and spiritual support, which is essential in helping patients cope with the stress and anxiety associated with end-of-life issues, particularly in disaster situations [36].

The study also highlighted the importance of preserving patient dignity and offering support, including aspects like maintaining presence, ensuring privacy, and involving family members in the care process. Family involvement, with proper guidance and support from the

healthcare team, is vital in maintaining the patient's dignity and fostering a truly person-centered care environment [37].

The provision of palliative care services is often limited by resource constraints in normal settings, and this becomes even more pronounced in crisis and disaster situations [7, 8]. In a disaster, palliative care services must be adapted to a significantly lower level of care [38]. The study found an urgent need to reorganize and adapt available resources and infrastructure to ensure the continuity of care. Establishing appropriate care pathways and procedures suited to the new reality of the disaster is essential. To ensure continuity of healthcare during disasters, it is crucial to provide adequate resources, invest in telehealth, and offer psychosocial support to patients, healthcare professionals, and informal caregivers [39].

The emotional and practical challenges of the disaster led to distress, destabilizing professional identities and potentially affecting the provision of care. However, nurses involved in disaster response should be equipped with tools to manage trauma, and palliative care nurses are generally better prepared to handle extreme situations due to their daily practice [40, 41]. Burnout among palliative care professionals can be mitigated through interventions that promote the emotional well-being of the team, emphasizing the importance of a healthy and supportive work environment. Organizational culture also plays a significant role in promoting emotional support. When palliative care teams feel valued and have safe spaces to express emotions and challenges, team cohesion and job satisfaction improve, ultimately enhancing patient care [42].

Nurses are strong advocates for ethical, holistic care for patients, families, and communities. Ethical reflection emerged as a central theme, with the team focused on ensuring that all patients had access to quality palliative care, mindful of the limitations that might affect care delivery. Consistent with other studies, a global reduction in palliative care referrals was observed in the post-disaster period, with referrals typically only made for particularly complex cases [43, 44]. This may stem from the perception that palliative care needs are secondary to other more immediate challenges, resulting in underutilization of these important resources during disasters [38].

The study also identified key determinants for effective disaster management, including teamwork, leadership, and training. Effective teamwork was associated with high job satisfaction, self-confidence, and professional development [41], with secure staffing of specialized palliative care nurses being essential for delivering safe and high-quality care [45]. Well-led teams improve communication both within the team and with patients, leading to better symptom management and higher patient satisfaction [46]. Nurse leaders must navigate unpredictable situations, making quick and cohesive decisions that guide the team to improve care quality. A leader must understand the team's characteristics, identify individual strengths and weaknesses, and delegate tasks accordingly [47].

Team training is crucial to ensuring the provision of care during disasters. Regular training helps build emotional resilience and the ability to cope with stress in high-pressure situations [48]. However, disaster management training for nurses is not as widely available as it should be, particularly in undergraduate programs [49] and in-service training within healthcare institutions [50], although participants in this study reported having participated in some form of training.

The findings of this study highlight the importance of integrating palliative care nurses' expertise to create an effective response across various domains of disaster management. While hospitals may have comprehensive disaster plans, these plans often fail to address the specific needs of different patient groups, particularly those requiring specialized palliative care [38]. To build resilient healthcare systems, palliative care and palliative support needs must be incorporated into systematic disaster preparedness for all risks, including various types of disasters [27, 51]. Palliative care nurses play a vital role in alleviating the suffering of those affected by such events [12, 13]. In these situations, nurses may need to continue providing care not only to patients already receiving palliative care but also to new patients requiring palliative care. However, numerous systemic barriers can impede their ability to respond effectively to public health emergencies [13]. Consistent with other studies [38], the findings stress the need to strengthen the perseverance of palliative care nurses in all types of disasters, to maintain care standards and ensure an effective response. Despite this, strategies to address the specific needs of palliative care have been inadequately integrated into disaster preparedness planning. Addressing health disparities and ensuring the equitable distribution of quality palliative care during stressful and rapidly changing situations are key responsibilities of palliative care nurses [12].

Limitations and future research

This study has some limitations, including the small number of participants and the fact that all participants experienced the same disaster situation in a hospital setting, making the findings highly specific. Nevertheless, the study contributes to a better understanding of the factors that guided the actions of palliative care nurses during the disaster. Research focusing on the effectiveness, value, and quality of palliative care interventions in disaster contexts can help improve future responses [8]. Future studies should consider the involvement of

palliative care nurses in other disaster scenarios and explore the perspectives of patients and their families.

Conclusion

Research on disaster response offers a unique opportunity to examine the vulnerability and resilience of healthcare teams. This study is innovative in its focus on a specific disaster situation and highlights the crucial role of palliative care nurses in disaster management. The findings underscore the importance of their expertise in responding to crises, emphasizing the need for their integration into the development of policies, planning, and effective response strategies. Given that the resources and strengths of palliative care are often under-recognized and underutilized, this study contributes to the growing body of knowledge supporting the integration of palliative care nurses into disaster response efforts. This integration can lead to more effective and compassionate care in future disaster situations, irrespective of the context.

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Author contributions
MM and ML were responsible for the conception and design of the study; MM, ML, DP, AC and AO were responsible for the acquisition, analysis and interpretation of the data. MM, ML, DP, AC, AO, CM, CC, TM and AJ drafted the article, which was revised and approved by all the authors.

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Data availability
The datasets used and analysed in this study are available from the corresponding author on reasonable request.

Declarations

Ethics approval and consent to participate
This study was approved by the Ethics Committee for Health at the Hospital do Divino Espírito Santo de Ponta Delgada (reference no. 1493/CES-HDESPD/2024). The study adhered to the principles set forth in the Helsinki Declaration and the Oviedo Convention for research involving human subjects. All participants were provided with detailed information about the study, had their questions answered by the principal investigator, and signed the informed consent form.

Consent for publication
Not applicable.

Competing interests
The authors declare no competing interests.

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