RESEARCH ARTICLE (ORIGINAL)

Nurse Managers' Strategies in Promoting a Safety Culture and Influencing Factors: A Qualitative Study

Estratégias dos Enfermeiros Gestores na Promoção da Cultura de Segurança e Fatores Condicionantes: Um Estudo Qualitativo

Estrategias de los Enfermeros Gestores en la Promoción de la Cultura de la Seguridad y Factores Condicionantes: Un Estudio Cualitativo

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Abstract

Background: The context and conditions in which health care is delivered are determining factors in creating safe environments, making it essential to involve professionals, patients, and families in a shared commitment to safety. Nurse managers play a decisive role in promoting a culture focused on safety.

Objective: To identify the strategies adopted by nurse managers to promote a safety culture and the factors that influence its promotion.

Methodology: Exploratory-descriptive qualitative study conducted with nurse managers of a hospital center in Portugal. Data were collected through a focus group and subsequently analyzed.

Results: Three categories emerged as influencing safety culture: strategies adopted, facilitators that promote it, and the constraints that limit it.

Conclusion: The study identified the strategies used by nurse managers in promoting a safety culture, as well as the factors that influence it, either positively or negatively.

Keywords: nurse administrators; safety culture; qualitative study

Resumo

Enquadramento: O contexto e as condições em que os cuidados de saúde são prestados são fatores determinantes para a criação de ambientes seguros, tornando-se essencial o envolvimento dos profissionais, dos doentes e das famílias, com compromisso comum com a segurança. O enfermeiro gestor desempenha um papel decisivo na promoção de uma cultura centrada na segurança.

Objetivo: Identificar as estratégias adotadas pelos enfermeiros gestores na promoção da cultura de segurança e os fatores que influenciam a sua promoção.

Metodologia: Estudo exploratório-descritivo, de natureza qualitativa, realizado com enfermeiros gestores, de um centro hospitalar em Portugal. Os dados foram recolhidos através de um *focus group* e de seguida analisados.

Resultados: Emergiram três categorias que influenciam a cultura de segurança: as estratégias adotadas, os facilitadores que a promovem e os constrangimentos que a limitam.

Conclusão: O estudo permitiu identificar as estratégias utilizadas pelos participantes, na promoção da cultura de segurança, bem como fatores que a condicionam, de forma favorável ou desfavorável.

Palavras-chave: enfermeiros administradores; cultura de segurança; estudo qualitativo

Resumen

Marco contextual: El contexto y las condiciones en las que se presta la asistencia sanitaria son factores determinantes para la creación de entornos seguros, por lo que es esencial la participación de los profesionales, los pacientes y las familias, con un compromiso común con la seguridad. El enfermero gestor desempeña un papel decisivo en la promoción de una cultura centrada en la seguridad.

Objetivo: Identificar las estrategias adoptadas por los enfermeros gestores en la promoción de la cultura de la seguridad y los factores que influyen en su promoción.

Metodología: Estudio exploratorio-descriptivo, de naturaleza cualitativa, realizado con enfermeros gestores de un centro hospitalario en Portugal. Los datos se recopilaron mediante un grupo focal y posteriormente se analizaron.

Resultados: Surgieron tres categorías que influyen en la cultura de seguridad: las estrategias adoptadas, los facilitadores que la promueven y las limitaciones que la restringen.

Conclusión: El estudio permitió identificar las estrategias utilizadas por los participantes para promover la cultura de la seguridad, así como los factores que la condicionan, de manera favorable o desfavorable.

Palabras clave: enfermeras administradoras; cultura de seguridad; estudio cualitativo

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Introduction

The context and conditions in which healthcare is delivered are determining factors for the creation of safe care environments. Healthcare institutions and professionals must be fully committed to patient safety, actively promoting a culture of safety. This requires prioritizing, developing, and sustaining practices that ensure safety and responding transparently to the complex challenges of healthcare delivery. To achieve this, professionals must be empowered through strategies that support their training and guidance in this domain.

The Regulation for the Advanced Added Competence in Management emphasizes the role of the nurse manager in ensuring professional and ethical practice, implementing continuous quality improvement in nursing care, optimizing responses to citizens' healthcare needs, and developing the competencies of team members to sustain evidence-based practice (Regulamento nº 76/2018 da Ordem dos Enfermeiros, 2018).

The regulation positions nurse managers as active agents in change processes, highlighting their social responsibility to promote a culture of safety grounded in transparency and continuous improvement.

Similarly, the International Council of Nurses (2022) states that nurses are in a privileged position to enhance the quality and safety of care, identifying safe care as a priority within research and clinical practice. The Portuguese Nursing Profession Regulator also reinforces that management functions performed by nurses are fundamental for guaranteeing the quality and safety of professional practice, representing a key factor in achieving health gains (Regulamento nº 76/2018 da Ordem dos Enfermeiros, 2018). Consequently, nurse managers play a decisive role in developing and implementing strategies that foster a culture of safety grounded in continuous improvement.

Considering these foundations, it is essential to identify the strategies adopted by nurse managers to promote a culture of safety and to examine the factors that influence its implementation in clinical practice. Understanding these elements is crucial to strengthening good practices in safety promotion and to reinforcing a culture that supports continuous quality improvement.

Background

Safety is a core component of quality management and a fundamental requirement for healthcare delivery. Ensuring safe care demands the involvement and collaboration of multiple stakeholders, including policymakers, institutions, healthcare professionals, patients, and civil society. To promote and strengthen healthcare safety, the National Plan for Patient Safety (*Plano Nacional para a Segurança dos Doentes* [PNSD]) 2021–2026 was developed, establishing the culture of safety as one of its structural pillars (Despacho nº 9390/2021 do Gabinete do Secretário de Estado Adjunto e da Saúde, 2021).

Each institution possesses a unique environment that influences and is influenced by professionals. Thus, both institutions and professionals act as agents and recipients of change, directly shaping safety culture. Safety culture is defined by a set of individual and collective beliefs, values, perceptions, skills, and attitudes that reflect an institution's commitment to patient safety, and it is recognized as a key management competency (Despacho nº 9390/2021 do Gabinete do Secretário de Estado Adjunto e da Saúde, 2021).

Assessing safety culture is essential for mitigating risks inherent to healthcare delivery and for strengthening patient safety. Ashurst (2017) emphasizes that evaluating an institution's safety culture enables the identification of strengths and weaknesses, supporting the development and implementation of strategies to reinforce the culture of safety and reduce errors. Consequently, conducting a preliminary diagnosis of the safety culture is a critical step prior to implementing changes related to patient safety. According to the Portuguese Directorate-General for Health standard 005/2018, national assessments indicate that several dimensions of safety culture require improvement in Portugal, including inter-unit collaboration, care handoffs and transitions, open communication, non-punitive responses to errors, reporting frequency, staffing levels, general perceptions of safety, and management support for patient safety (Direção-Geral da Saúde [DGS], 2018). Effective communication and cooperation among team members are essential for strengthening decision-making and teamwork and fostering a robust safety culture.

Healthcare quality and patient safety must be considered essential requirements in nursing practice. Developing a strong safety culture depends significantly on the contribution of nurse managers, who serve as leaders of change. The regulation of increased and advanced competence in management assigns nurse managers the responsibility of ensuring the safety and quality of nursing care.

The provision of quality and, therefore, safe care is influenced by several factors, namely the support and leadership of nurse managers (Olds et al., 2017). Effective leaders are capable of engaging teams in the organizational culture by acting consistently and fairly, serving as role models, and enhancing leadership effectiveness through relational competence (Ko & Yu, 2017). In doing so, nurse managers foster motivated teams that actively promote a culture of safety.

Research question

Which strategies do nurse managers identify as contributing to the promotion of a safety culture in a hospital in central Portugal?

Methodology

This study followed an exploratory–descriptive design with a qualitative approach. Nurse managers were intentionally selected to provide an in-depth understanding of the phenomenon under investigation. The inclusion

criteria comprised nurse managers from all departments of a hospital in central Portugal, with more than six months of managerial experience, who agreed to participate in the study.

Prior contact was established with potential participants to explain the purpose of the study. The date, time, and location for data collection were scheduled according to participants' availability and preference. Data were collected through a focus group conducted on March 22, 2023.

The focus group was guided by a script organized into three sections: introduction, development/exploration, and conclusion. The introduction included participant presentations, an explanation of the study objectives, clarification of the researcher's and observer's roles, confidentiality assurances, authorization for audio recording, completion of a sociodemographic questionnaire, and signing of the informed consent form. The development stage involved open-ended questions aimed at exploring the safety culture theme. The conclusion consisted of a brief summary of the information collected, allowing participants to validate or clarify the information, followed by expressions of gratitude.

The session was audio-recorded, and an additional observer took detailed notes to complement the discussion. The researcher moderated the session, ensuring balanced participation and creating an environment in which all participants could share their perspectives. The focus group lasted approximately 90 minutes.

The audio recording was transcribed for analysis. Content analysis was carried out following Bardin's (2016) methodological framework. The transcribed data were subsequently imported into NVivo software.

Prior to data collection, participants were informed of the study's purpose, estimated duration, their right to withdraw at any point without consequences, and the researchers' intention to disseminate results. Confidentiality and anonymity were assured, and written informed consent was obtained. The project was approved by the Ethics Committee of the Nursing School of Coimbra (Opinion No. P936/01-2023).

Results

Ten nurses participated in the focus group, coded from P1 to P10. Participants were between 54 and 64 years old; seven were female and three were male. Their length of professional service ranged from 33 to 43 years, and their managerial experience ranged from 1 to 25 years. Regarding academic qualifications, seven participants were nurse specialists, two held master's degrees, and one held a doctorate.

The content analysis of participants' perceptions regarding nurse managers' contributions to safety culture resulted in three categories related to safety culture promotion: strategies for promoting a safety culture, facilitators, and constraints.

Across the discussion, nurse managers highlighted several strategies used within their services to strengthen and promote a culture of safety. These strategies included meetings, unambiguous patient identification, risk monitoring, training, and assignment of specific areas of responsibility.

Among the strategies identified, participants mentioned meetings in which critical incidents are discussed. As one nurse explained, "Whenever there is a problem . . . we talk about it during shift change, . . . if there is anything that could have been avoided . . ." (P1). Another strategy highlighted was unambiguous patient identification, as reported: ". . . the unambiguous identification of our children and adolescents . . . influences the safety of care" (P3). Participants highlighted the relevance of training, noting that: ". . . training was reinforced to keep in-service training active, it is an important issue" (P5), including ". . . training also in the area of risk" (P1). The assignment of areas of responsibility was another strategy mentioned. As some participants stated: ". . . we have two people responsible for resuscitation carts" (P5), ". . . I have two people responsible for infection" (P5), ". . . we have one person responsible for equipment. . ." (P5).

Participants also identified factors that facilitate the promotion of a safety culture, highlighting the documentation of practices, motivation, multidisciplinary training, accreditation, skills, and leadership. As expressed by the participants: ". . . documenting practices translates into greater safety..." (P2), ". . . work flows only when training processes are multidisciplinary or multi-professional" (P3), ". . . one aspect that greatly facilitating this is the accreditation process" (P3), "... the skills of these teams are very important" (P6), "... the manager is the driving force behind all these issues. . ." (P10), ". . . we must strictly comply with all stages to prevent risk" (P2).

Regarding constraints, participants pointed to factors hindering the promotion of a safety culture, such as punitive reporting, inefficient interoperability, and insufficient staffing. Punitive approaches to incident reporting still occur in some contexts. One participant emphasized the need to reverse this paradigm: ". . . notifications should be made in a non-punitive manner to make it clear that the focus is on improving processes, not on the act itself" (P2), while another stated ". . . in my view, this transition is important and should be recognized by everyone" (P3). Inefficient interoperability was also noted as a barrier to patient safety: ". . . because the platforms are not interoperable. . ., things become complicated . . ." (P3). Finally, insufficient staffing was another factor identified by the participants: ". . . staffing levels are very inadequate" (P9).

Discussion

From the participants' perspective, holding meetings that allow for analysis and reflection on critical incidents, as well as the identification of ways to prevent them, is a fundamental strategy for promoting a culture of safety. This perspective is supported by Azaby et al. (2021), who state that the learning generated through incident analysis promotes a culture of safety and enhances patient safety.

Participants emphasized unambiguous identification as a key aspect of care safety and, therefore, as a strategy for promoting a culture of safety. They highlighted the importance of identification bracelets, including electronic devices that allow patient data to be recognized, ensuring greater safety. The PNSD 2021-2026 explicitly identifies unambiguous patient identification as a strategy for consolidating safe practices (Despacho nº 9390/2021 do Gabinete do Secretário de Estado Adjunto e da Saúde, 2021). Likewise, Riplinger et al. (2020) state that unambiguous patient identification is essential for safe care delivery, as incorrect identification increases the likelihood of errors.

Risk monitoring also emerged as a strategy for promoting a culture of safety. Participants noted that risk monitoring contributes to safer care, as risk identification and analysis enable the implementation of corrective measures that support continuous improvement. This aligns with policies that reinforce the consolidation of safe practices (Despacho nº 9390/2021 do Gabinete do Secretário de Estado Adjunto e da Saúde, 2021), allowing risks to be identified, interventions to be implemented, and their effectiveness to be periodically evaluated (Capin et al., 2022).

Training was also emphasized as a strategy for promoting a culture of safety by equipping professionals with greater skills. Amiri et al. (2018) highlight the contribution of training through the results of a study examining the effects of implementing a training program. To support the development of professionals, the PNSD 2021-2026 recommends the implementation of an annual training plan. Batista et al. (2019) state that training processes implemented by nurse managers strongly contribute to strengthening communication skills, which in turn promotes a culture of safety.

Participating nurse managers indicated that assigning areas of responsibility makes nurses more competent and more conscientious regarding patient safety, which is therefore an effective strategy for promoting a culture of safety. The Directorate-General for Health quality standards guide also highlights the importance of assigning responsibilities across different areas of activity to ensure that care is safe at all times (Direção-Geral da Saúde, 2023).

In addition to these strategies, participants highlighted aspects that facilitate safe practices that promote a culture of safety. The importance of effective communication was emphasized, particularly in the transmission of information and the prevention of incidents. Oliveira and Teixeira (2023) suggest that communication among healthcare professionals is essential for promoting safety.

Participants also believed that job motivation strengthens safety culture, as professionals become more involved in improvement processes. This view is supported by Okello and Gilson (2015) and Alstedh et al. (2020), who highlight the importance of motivation in professional performance and quality of care.

The emphasis on multidisciplinary training also emerged from the participants' discourse as an element that facilitates a culture of safety. This finding is corroborated by Lopez-Jeng and Eberth (2020), who demonstrate that multidisciplinary training in health facilitates the development of knowledge, attitudes, and motivation among professionals.

Participants consider accreditation to be an important facilitator of continuous quality improvement processes and the promotion of a culture of safety, emphasizing that their appropriation of this safety culture occurred reactively in response to the accreditation processes, which they described as a driver of development.

For Mitchell et al. (2020), accreditation is an excellent contribution to the quality and safety of care, as it provides standards and protocols that guide practices and support evidence-based care. Vaismoradi et al. (2020) likewise argue that the use of standardized processes based on validated tools is essential to ensuring the quality of care. Participants also highlighted professional skills as factors that facilitate the promotion of a culture of safety. Managers consider that team differentiation, both in terms of skills and generations, contributes to strengthening this culture.

Leadership emerged as a potential facilitator in promoting a culture of safety. Managers thus play an important role in energizing teams and managing human capital, ensuring that each workplace has the necessary resources and skills, providing organized training in response to identified needs, and providing greater safety for patients and professionals. They also emphasize that proactive, well-founded leadership, supported by knowledge of legislation, is more sustainable for decision-making. As part of their role, they also mention the management of materials and equipment, ensuring that care is provided safely. According to Sexton et al. (2021), a leadership that recognizes the capabilities of its team, offers praise, and celebrates achievements promotes professional well-being and a safety culture, thereby improving care.

Several obstacles and constraints were identified that may compromise patient safety, particularly the development of a safety culture. Incident reporting was described as punitive in nature, which discourages the reporting of adverse events. This finding is aligned with Azyabi et al. (2021), who note that a culture of blame remains prevalent. To promote a culture of safety, this paradigm must be reversed (Alswat et al., 2017), reframing errors not as individual failings but as opportunities for improvement (Mekonnen et al., 2017). As Parker and Davies (2020) emphasize, errors in healthcare pose a serious threat to patient safety; therefore, assigning responsibility (both individual and institutional) for errors is essential not only for accountability but also for preventing future errors.

The lack of interoperability in information systems also emerged as a constraint to safety culture, since participants report that interoperability is either absent or insufficient, particularly in notification systems, which limits the possibility of receiving feedback on safety incidents. Vaismoradi et al. (2020) reinforce that adequate electronic systems for communication and information sharing have the potential to promote a safety culture.

Insufficient funding was additionally perceived as a barrier. The PNSD 2015-2020 highlights the need to improve

staffing levels to ensure quality and safe care, while the PNSD 2021-2026 stresses the importance of allocating protected time for patient safety activities and the implementation of the national plan. Work overload, identified in this study, is also highlighted in the literature as a barrier to safe care (Azyabi et al., 2021; Wami et al., 2016; Zhao et al., 2017).

Given that assessing safety culture allows for the identification of areas for improvement, the application of the questionnaire in the different contexts may be an effective strategy to support diagnosis, planning, and implementation of improvement measures.

Nurse managers, by virtue of their skills, should act as key agents in promoting safety culture. Their responsibilities include disseminating the PNSD, integrating it into annual in-service training plans, sharing information and reflecting on critical incidents and notifications, involving teams in proposing quality improvement strategies, empowering and motivating them to the internalization of safety culture and its fundamental principles, thus generating health benefits for patients, professionals, services, and institutions.

Nevertheless, these professionals face several obstacles that must be overcome for a culture of safety to effectively take root, through investment in continuous training, safe equipment, risk monitoring, and non-punitive approaches.

This study has limitations. Participants were nurse managers from a single institution, which may restrict the generalizability of results, as each institution has its own dynamics and cultural characteristics.

Conclusion

A culture of safety is essential to creating an environment conducive to practice, where nurses are expected to perform to the highest standards and, consequently, provide safe care.

This study identified the strategies used by nurse managers to promote a culture of safety, as well as the factors that influence it either positively or negatively, conceptualized as facilitators or barriers.

Patient safety is intrinsically linked to the quality of care, and several authors have highlighted that healthcare costs rise significantly when poor quality outweighs quality. It is, therefore, the responsibility of nurse managers to intervene in clinical governance, acting as catalysts for change and demonstrating the health gains achieved through the implementation and monitoring of nursing-sensitive indicators within their services. In addition, they must motivate their teams to deliver safe care, thereby ensuring continuous quality improvement and reinforcing a safety culture.

Given the relevance of the topic and the data obtained regarding the strategies implemented by nurse managers and the factors that influence it, it would be appropriate to replicate this methodological approach with nurses working in direct care in order to understand how they interpret safety culture.

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