









REFLECTION ON SAFETY CULTURE AND THE NOVICE TO EXPERT THEORY IN THE SURGICAL SETTING

REFLEXÃO SOBRE CULTURA DE SEGURANÇA E A TEORIA DE INICIADO A PERITO NO AMBIENTE CIRÚRGICO

REFLEXIÓN SOBRE LA CULTURA DE SEGURIDAD Y LA TEORÍA DE NOVATO A EXPERTO EN EL ENTORNO QUIRÚRGICO

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**ABSTRACT**

This study aims to reflect on the safety culture and Benner's nursing theory. It consists of a reflective analysis of professional experience as a contributing element to the development of a safety culture in the surgical environment. In this context, it is highlighted that the novice to expert theory has significant implications for safety culture, recognizing the importance of continuous training, critical reflection, and staff's individual and collective responsibility in the provision of safe patient care. In addition, it identifies the impact that professional maturity has on the development of a culture of safety in the operating room. This reflection encourages nurses, managers and other health professionals working in the surgical environment to understand the importance of professional skills in improving the safety culture, emphasizing the value of professional experience and promoting its development through incentive programs that integrate skills and knowledge acquired through experience.

**Keywords:** Organizational Culture; Surgicenters; Patient Safety; Nursing Theory; Problem-Based Learning.

**RESUMO**

Este estudo visa refletir sobre a cultura de segurança e a teoria de enfermagem de Benner. Consiste em uma análise reflexiva da experiência profissional como elemento contribuinte para o desenvolvimento de uma cultura de segurança no ambiente cirúrgico. Neste contexto, destaca-se que a teoria do iniciado ao perito tem implicações significativas para a cultura de segurança, ao reconhecer a importância da formação contínua, da reflexão crítica, e da responsabilidade individual e coletiva dos profissionais na oferta de cuidados seguros aos pacientes. Adicionalmente, identifica-se o impacto que a maturidade profissional exerce no desenvolvimento de uma cultura de segurança no bloco operatório. Esta reflexão instiga enfermeiros, gestores e outros profissionais de saúde atuantes no ambiente cirúrgico a compreenderem a relevância das competências profissionais para o aprimoramento da cultura de segurança, enfatizando a valorização da experiência profissional e promovendo seu desenvolvimento por meio de programas de incentivo que integram competências e conhecimentos adquiridos com a experiência.

**Palavras-chave:** Cultura Organizacional; Centros Cirúrgicos; Segurança do Paciente; Teoria de Enfermagem; Aprendizagem Baseada em Problemas.

**RESUMEN**

Este estudio tiene como objetivo reflexionar sobre la cultura de seguridad y la teoría de enfermería de Benner. Se lleva a cabo un análisis reflexivo de la experiencia profesional como contribución al desarrollo de la cultura de seguridad en el entorno quirúrgico. En este contexto, se destaca que la teoría de novato a experto tiene implicaciones significativas para la cultura de seguridad, al reconocer la importancia de la formación continua, la reflexión crítica y la responsabilidad individual y colectiva del personal en la provisión de cuidados seguros a los pacientes. Además, se identifica el impacto que tiene la madurez profesional en el desarrollo de una cultura de seguridad en el quirófano. Dicha reflexión insta a enfermeros, gestores y otros profesionales de la salud que trabajan en el entorno quirúrgico a comprender la importancia de las habilidades profesionales en el fortalecimiento de la cultura de seguridad, valorizando la experiencia profesional y fomentando su desarrollo a través de programas de incentivo que integren las competencias y conocimientos adquiridos con la experiencia.

**Palabras clave:** Cultura Organizacional; Centros Quirúrgicos; Seguridad del Paciente; Teoría de Enfermería; Aprendizaje Basado en Problemas.

## INTRODUCTION

Safe care is fundamental to patient care. Despite this, adverse events are frequent. To prevent patient harm, healthcare organizations need to promote a culture of safety. Patient safety is currently defined as a set of strategies to create cultures and behaviours in healthcare environments that reduce the occurrence of avoidable harm, recognizing that human fallibility is intrinsically related to the care process<sup>(1)</sup>.

Safety culture, understood as a set of values, attitudes, skills and behaviors, is crucial for commitment to health and safety management. Understanding the factors that strengthen this culture in healthcare organizations is essential. Assessing safety culture serves as a starting point for measuring the organizational conditions that can lead to incidents or failures in health services, resulting in a diagnosis that can promote change<sup>(2)</sup>.

Worldwide, there are efforts to promote safety culture with a focus on organizational learning and improvement, multi-professional communication and patient and professional involvement<sup>(3)</sup>. Some studies show a significant relationship between perception of safety culture and length of professional experience and age<sup>(4-6)</sup>. This relationship allows managers to allocate human resources strategically, facilitating cooperation and communication, as well as learning between teams<sup>(5)</sup>.

It is vital to promote the culture of safety by emphasizing professional experience and age, as expertise contributes to a deeper knowledge of the care process, preventing undesirable events<sup>(6)</sup>. In 2023, the Joint Commission report revealed that undesirable events in the operating room environment were among the ten most frequent sentinel events<sup>(7)</sup>.

Surgical safety has been considered a priority investment measure. The second global challenge, called 'Safe Surgeries Save Lives', aims to raise quality standards and prevent avoidable risks in surgical interventions. It is also part of the Global Patient Safety Action Plan 2021-2030: Towards Eliminating Avoidable Harm in Health Care. This plan aims to achieve the maximum reduction in avoidable incidents related to healthcare, including perioperative safety, as a global concern. It highlights the need to invest in qualified human resources, evaluation and the development of a safety culture to guarantee perioperative safety<sup>(8-10)</sup>.

Faced with this problem, promoting safe care is a priority in the perioperative environment. There are several measures that can minimize sentinel events, post-surgical complications and avoidable adverse events, such as assigning experienced professionals to professionals

who are developing specific skills, thus contributing to reducing undesirable events<sup>(11)</sup>. Patricia Benner's nursing theory, *From Novice to Expert*, offers a theoretical framework by which professional practice is sustained through experiential learning and the transmission of knowledge acquired in practical settings<sup>(12)</sup>.

Patricia Benner developed the theory "From Novice to Expert" based on the Dreyfus Model of Skill Acquisition. In 1980, Benner adapted this model with the aim of evaluating the applicability of the Dreyfus model in nursing practice, taking into account the different stages of skill acquisition. According to Benner, professional development in nursing evolves through experiential learning and the application of acquired knowledge in practical settings. His theory, "From Novice to Expert", proposes that the evolution of nursing skills takes place through five levels of proficiency: novice, advanced beginner, competent, proficient and expert<sup>(12)</sup>.

The applicability of Benner's theory in the surgical context is essential because, on reaching the last clinical proficiency level, the professional significantly improves their performance in practice and in the healthcare organization. They adopt protocols and conducts more effectively, deeply understanding their role as a facilitator in actions aimed at perioperative patient safety.

Given the importance of and evidence linking professional experience with the development of safety culture in the surgical environment, this study aims to reflect on safety culture and the transition from novice to expert, according to Benner, as a possible influencer in the development of a more solid safety culture in the surgical environment.

## METHOD

This is a theoretical and reflective study based on Patricia Benner's Nursing Theory - "from novice to expert". We analyzed the main elements of the theory and its application in developing a culture of safety in the surgical environment. The theoretical basis comes from the author's primary productions, including the study of her book and Benner's work, the critical reading of articles on professional experience as a contribution to patient safety culture in the operating room and on the acquisition of competencies. The material was selected by means of a narrative literature review.

### Safety culture in the surgical environment

Safety culture has been the subject of study in various contexts, particularly in hospitals, where it is the focus of care and the quality of health care. Twenty-five years

ago, the Institute of Medicine highlighted to healthcare organizations the importance of developing and improving a culture of safety, which is essential for preventing adverse events<sup>(13)</sup>.

The first step towards building this cultural maturity is to carry out research to assess the attitudes of health professionals, making progress in protecting surgical patients<sup>(4)</sup>. This assessment is possible through the safety climate, a quantifiable component of safety culture, defined by the perception of professionals about safety practices. The Safety Attitudes Questionnaire/Operating Room (SAQ/OR) is an outstanding tool for measuring this climate<sup>(10)</sup>.

The safety culture must be analyzed in conjunction with the organizational characteristics, identifying the maturity level of the safety culture, taking into account experience, age and other variables<sup>(5)</sup>. According to a cultural maturity model developed by Westrum in 1997 and adapted by Hudson in 2003, culture evolves as the level of information and trust increases (Figure 1)<sup>(14)</sup>.

The evolution of safety culture maturity is described in five levels. Initially, the pathological stage, in which safety is seen as a problem for workers. At the reactive level, the organization starts to consider safety important after incidents. At the calculative level, the safety management system is driven by increased information and experiences. In the proactive stage, professionals initiate safety actions aimed at improving processes. At the last

level, the generative stage, safety is seen as a fundamental organizational investment<sup>(14)</sup>.

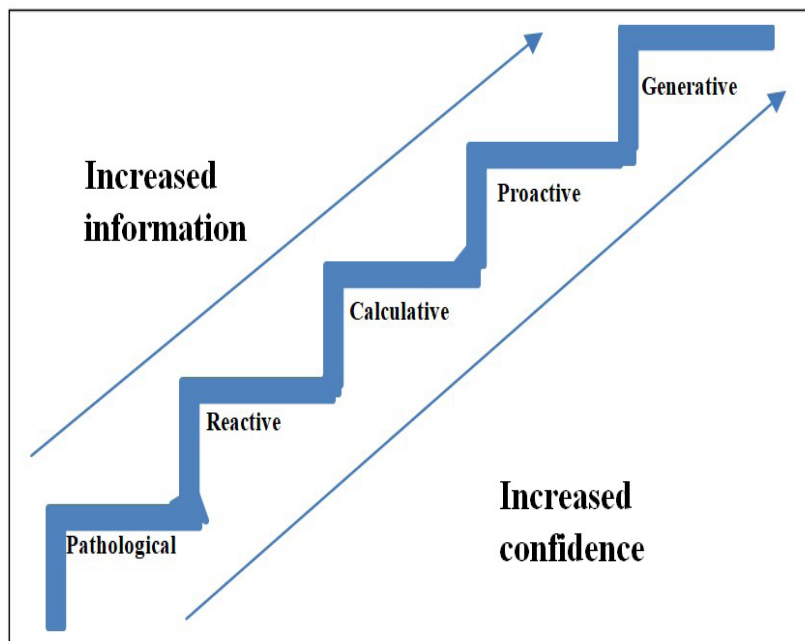
There is evidence that older operating room nurses are more satisfied with their working conditions than younger ones, and that they rate their level of competence higher as they accumulate age and experience<sup>(6,15)</sup>.

Experienced professionals are more likely to maintain a good safety attitude than less experienced ones, suggesting that the presence of experienced professionals in operating rooms can positively influence the safety climate<sup>(6)</sup>. It is crucial to maintain specialized and experienced professionals in critical environments to ensure safe care, as well as the integration of young or less experienced professionals, promoting an environment of support and guidance, which increases the level of information and trust<sup>(15)</sup>.

In order for the surgical environment to mature culturally, it is necessary for leaders and senior management to take an assertive stance towards the needs of the care team, providing an environment conducive to development, with the aim of evolving to the generative level of the safety culture.

Recognizing that professional experience and age contribute to the culture of safety in the operating room is an important strategic management subsidy for the allocation of human resources, associated with the essential standards of an organization that values attitudes, skills, behaviors and commitment to health and safety management.

Figure 1 - Safety culture maturity evolution model.



Source: Adapted from de Hudson, 2003

## Novice to Expert Theory

Benner's theory is based on the individual's experience and education. The professional at novice level, with no accumulated experience, follows instructions step by step, having difficulty discerning between relevant and irrelevant aspects. As he develops in the field, he becomes an advanced beginner, able to perceive significant changes in the patient's condition after facing various real-life situations. Despite their responsibility for care, they still depend on the guidance of more experienced professionals. The advanced beginner follows the rules and faces difficulties in understanding the situation from a broader perspective<sup>(12)</sup>.

At the competent level, the professional begins to plan actions consciously and deliberately, identifies aspects that require attention and gains efficiency and organization. They acquire the knowledge and ability to deal with unforeseen events, becoming adept at making decisions and anticipating and solving clinical problems, although they are still focused on time management and task organization. This level is reached between 2 and 3 years of practice<sup>(12)</sup>.

The proficient professional understands situations as a whole and is guided by perception in their actions, marking a qualitative leap from the previous level, as they learn by inductive methods and case studies. This level is reached, on mean, after 3 to 5 years of practice in the same field<sup>(12)</sup>. The expert, the last level, is not based on rules. They perceive the totality of the situation and direct their care precisely, managing to anticipate problems and actions with high assertiveness. According to Benner, the knowledge acquired in clinical expertise is fundamental to the advancement of nursing practice and the development of nursing science<sup>(12)</sup>.

The acquisition of skills is progressive, but not necessarily linear (Figure 2), as professional development can experience stagnation or setbacks. In order to progress to expert level, it is vital that the professional engages deeply with their clinical practice.

Benner's theory is based on the individual's experience, establishing the acquisition of competencies at five proficiency levels and stressing the importance of deep involvement in practice. This theory relates to safety culture by demonstrating that age and professional experience are essential elements for continuous training, attitudes towards safety and the maturing of safety culture in the operating room.

The complexity and responsibility of the surgical team requires knowledge that is constantly developing. In this context, the article is based on Benner's theoretical

framework, which shows that professionals develop their work skills as they accumulate experience in their field. This theory has direct implications for the safety culture, recognizing the importance of continuous training, critical reflection and individual and collective responsibility in quality and safe patient care.

This reflection identifies the impact that professional maturity has on the development of a safety culture in the operating room. By applying the novice to expert theory to the surgical context, it can be seen that, at the last clinical proficiency level, the professional follows the protocols and behaves in such a way as to fully understand their role as a facilitator of perioperative patient safety.

Figure 2 - Representation of the acquisition of skills in five levels in the light of the Novice to Expert theory.



Source: prepared by the authors.

## Safety culture in the operating room and professional experience

For the safety culture to mature, a more assertive management process is needed, with interventions that catalyze the development of skills and enhance the initiate's evolution into an expert<sup>(10)</sup>. The acquisition of skills must begin during the undergraduate course, when the professional is at novice level. Through real-life care situations, skills are acquired and developed, building up a body of practical and theoretical knowledge<sup>(12)</sup>.

Therefore, valuing the process of professional development is a crucial management strategy for developing skills and a culture of safety in healthcare institutions, especially in the operating room. This strategy can reduce adverse events and surgical mortality, contributing to an improvement in the quality of care provided to patients, since experienced professionals need less cognitive and behavioral effort to perform<sup>(4)</sup>.

Benner recognizes that with experience and mastery, competence is transformed, optimizing professional actions. With the growing emphasis on system errors, the importance of individual contribution and experience should not be overlooked. Acting as a safety valve is one of the responsibilities of the healthcare professional, guaranteeing care in a safe and conscious manner<sup>(12)</sup>. The more experienced the professional, the better able they will be to identify attitudes that could lead to incidents.

Thus, professional experience is a unifying element in the formation and development of the patient safety climate and is intrinsically related to the assumption of the novice to expert theory, with the aim of improving the quality and safety of care. The experiences, learning and knowledge of the expert professional influence how patient safety issues should be addressed in the surgical environment, varying according to the level of skill and education of the professional, and above all, collectively, contributing to the safety culture in the operating room.

From this analysis, it is possible to connect the model proposed by Hudson to the levels presented by Benner, understanding that as the professional increases their experience and knowledge, the more they evolve in the acquisition of skills and the maturity of the safety culture. These experiences allow professionals to progress from the bottom to the top of the safety culture maturity pyramid (Figure 3).

At the start of their training process, inexperienced professionals see safety failures as a desire not to be detected by leaders. They don't yet have the consolidated experience that would allow them to gain an adequate perception of the safety culture in the surgical environment. At this point, the novice level is equivalent to the pathological stage<sup>(13,15)</sup>.

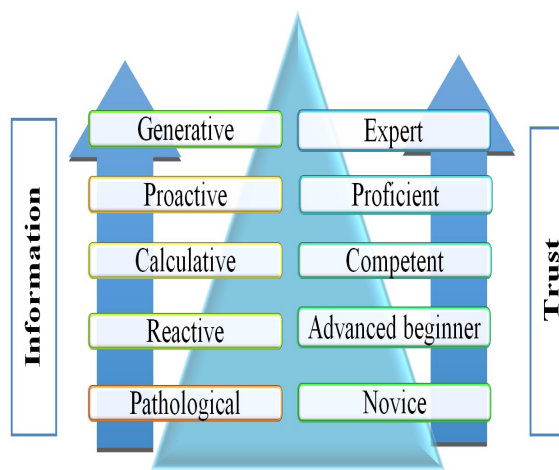
As their level of information and confidence increases, as a result of their experiences in their field, their skills are developed. At the reactive level, the organization starts to consider the importance of safety after incidents occur, reflecting corrective and preventive actions. The professional then gains more information and confidence from the opportunity to face real situations in practice, finding themselves as an advanced beginner and following the rules determined for corrective and preventive actions<sup>(13,15)</sup>.

As this professional works, the safety culture develops and matures, until it reaches the stage where it perceives safety as fundamental in the surgical environment and an integral part of the healthcare institution. Thus, they progress from competent to proficient, acquiring more

information and confidence to support safety initiatives, evolving from the calculative to the proactive level<sup>(13,15)</sup>.

When they reach the last level, they no longer depend on rules to support their actions, because as an expert they can predict the causes that favor an incident and anticipate it assertively. Safety culture becomes an integral part of their values and attitudes, and they reach the top of the pyramid, being at the generative level, with skills acquired through information and competence developed as an expert<sup>(13,15)</sup>. Based on this theoretical reflection, it is suggested that cross-sectional studies and mixed methods be carried out in future research, with the aim of identifying how professional experience and age contribute to the safety culture in the operating room, allowing the results to be generalized.

Figure 3 - Pyramid of the safety culture maturity process.



Source: The authors. Representation based on Hudson's model (2003) and Patricia Benner's theory (2004).

## CONCLUSION

This theoretical reflection encourages nurses, managers and other professionals in the surgical environment to recognize the importance of professional skills in developing a culture of safety, valuing professional experience, identifying the level at which the professional is at and stimulating their growth through incentive programs that integrate skills and knowledge acquired with lived experience.

Finally, expert professionals understand the solutions that solve problems as they arise, recognizing that to err is human and that their professional experiences favor decision making in favor of surgical patient safety, being prepared to do so.

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