

Nursing and the humanization of care in times of technological advances*Enfermería y la humanización del cuidado en tiempos de avances tecnológicos**A enfermagem e a humanização do cuidado em tempos de avanços tecnológicos***Renato Philipe de Sousa^{1*}**

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Abstract

This study aimed to critically discuss the balance between technological innovation and the humanization of nursing care, considering Wiedenbach's theory. This is a reflective study based on Ernestine Wiedenbach's Theory of the Role of Clinical Nursing. Although health technologies have provided significant advances in nursing practice, there is a risk of dehumanization in care. The discussion highlights the need to integrate these innovations in a balanced manner, preserving patient-centeredness and intentional practice, according to Ernestine Wiedenbach's principles. The critical training of nurses becomes essential to mediate this relationship. It is concluded that nursing must continue to evolve technologically, but without losing focus on humanization, ensuring that care remains ethical and centered on the individual.

Descriptors: Nursing Care; Health Technology; Humanization of Care; Public Health; Global Health.**Resumen**

El objetivo fue debatir críticamente el equilibrio entre la innovación tecnológica y la humanización del cuidado de enfermería, a la luz de la teoría de Wiedenbach. Se trata de un estudio reflexivo basado en la Teoría del Rol de Enfermería Clínica de Ernestine Wiedenbach. Aunque las tecnologías sanitarias aportan avances significativos en la práctica de enfermería, existe el riesgo de deshumanizar la atención. La discusión destaca la necesidad de integrar estas innovaciones de manera equilibrada, preservando el enfoque centrado en el paciente y la práctica intencional, de acuerdo con los principios de Ernestine Wiedenbach. La formación crítica de los enfermeros se vuelve fundamental para mediar en esta relación. Se concluye que la enfermería debe seguir evolucionando tecnológicamente, pero sin perder el foco en la humanización, asegurando que el cuidado siga siendo ético y centrado en el individuo.

Descriptoros: Atención de Enfermería; Tecnología de la Salud; Humanización de la Asistencia; Salud Pública; Salud Global.**Resumo**

Objetivou-se debater criticamente sobre o equilíbrio entre a inovação tecnológica e a humanização do cuidado na enfermagem, à luz da teoria de Wiedenbach. Trata-se de um estudo reflexivo com fundamentação baseada na Teoria do Papel da Enfermagem Clínica de Ernestine Wiedenbach. Embora as tecnologias de saúde proporcionem avanços significativos na prática de enfermagem, há um risco de desumanização do cuidado. A discussão destaca a necessidade de integrar essas inovações de maneira equilibrada, preservando a centralidade do paciente e a prática intencional, conforme os princípios de Ernestine Wiedenbach. A formação crítica dos enfermeiros se torna fundamental para mediar essa relação. Conclui-se que a enfermagem deve continuar evoluindo tecnologicamente, mas sem perder o foco na humanização, garantindo que o cuidado permaneça ético e centrado no indivíduo.

Descritores: Cuidados de Enfermagem; Tecnologia em Saúde; Humanização da Assistência; Saúde Coletiva; Saúde Global.

Introduction

Contemporary nursing is undergoing a period of intense transformation, driven by technological advances and the incorporation of new digital tools into healthcare practices. Robotic assistants, artificial intelligence applied to diagnostics, remote monitoring of vital signs, and integrated electronic records are reshaping the daily lives of healthcare professionals. While these innovations bring undeniable gains in terms of efficiency, accuracy, and expanded access to care, significant concerns are emerging about the impact of these resources on the quality of care provided and on the humanization of care^{1,2}.

Humanization, traditionally seen as a pillar of nursing practice, is intrinsically linked to the interpersonal relationship between nurses and patients. This relational aspect promotes not only physical recovery but also the emotional comfort and dignity of patients. However, with the advancement of automated technologies, there is a need to reflect on how nursing can preserve the centrality of human care in an environment increasingly mediated by machines and algorithms³.

In this context, Ernestine Wiedenbach's Clinical Nursing Role Theory offers a unique and underexplored concept. Although not widely disseminated in contemporary literature, this theory emphasizes nursing as an art, in which the goal is to meet the patient's perceived needs based on a philosophy of care. Wiedenbach emphasizes that nursing practice should be guided by an understanding of each patient's individual needs, rather than relying exclusively on standardized interventions or automated protocols^{3,4}.

This study, therefore, seeks to critically debate the balance between technological innovation and the humanization of nursing care, considering Wiedenbach's theory. By reviving and applying his concepts to the current context, we propose analyzing how nurses can act as facilitators of humanized care, even in a setting replete with advanced technologies. Such reflection becomes necessary as the nursing of the future is shaped around a paradox: maintaining human warmth in an increasingly robotic environment.

Methodology

This study is based on the philosophy of Ernestine Wiedenbach, a nursing theorist whose contributions, although less widely known than those of Florence Nightingale or Jean Watson, offer an exceptionally humanistic and practical approach to care. Born in Germany in 1900 and later settling in the United States, Wiedenbach developed her career as a nurse, educator, and researcher. Her most notable work, "Role Theory of Clinical Nursing," emerged as a response to her observations of daily nursing practice and the fundamental human needs that were often inadequately addressed by conventional medical models⁴.

The Clinical Nursing Role Theory is centered on the premise that nursing is an art, grounded in sensitivity, intuition, and the nurse's ability to respond to the perceived needs of the patient. For Wiedenbach, nursing practice is not limited to technical interventions or standardized

Wiedenbach outlines three central concepts in his theory: Purpose - The nurse's purpose is to meet the patient's perceived needs, which may be physical, emotional, social, or spiritual. Care should be individualized, based on a careful assessment of each individual's specific needs. Practice - Nursing practice involves intentional actions performed to promote health, alleviate suffering, or help the patient cope with chronic and incurable conditions. Effective practice depends on the nurse's technical competence but also on their ability to build a trusting relationship with the patient. Philosophy - Wiedenbach believed that every nurse should have a philosophy of care, that is, a set of beliefs and values that guide their practice. These values include respect for the patient's dignity, empathy, and a commitment to the well-being of others. He emphasizes that these three components are interconnected, and nursing practice is seen as a manifestation of the nurse's philosophy and purpose. At its core, Wiedenbach emphasizes that care must be intentional and human-centered, rather than becoming a mechanized and depersonalized process⁶.

Although developed in the 1960s, Wiedenbach's Clinical Nursing Role Theory remains highly relevant today, especially given the technological advances that have reshaped nursing practice. The introduction of advanced technologies, such as artificial intelligence systems, robotics, and remote monitoring devices, presents an opportunity to improve care, but also risks dehumanizing the care process. In this sense, Wiedenbach reminds us that the essence of nursing lies in human interaction, in the ability to perceive and respond to patients' needs holistically⁴⁻⁶.

Wiedenbach's philosophy can be seen as a counterpoint to the automation and standardization movement that has permeated the healthcare field. Technology, despite its potential to increase efficiency and improve clinical outcomes, should not be adopted at the expense of losing human contact. The concept of "purpose" is particularly relevant here, as the use of technological tools should always be subordinated to the greater goal of meeting the patient's perceived needs, not replacing the nurse's clinical assessment and critical judgment^{4,6}.

Wiedenbach anticipates, in some ways, modern discussions about the impact of technology on healthcare. His theory, centered on the individualization of care and the nurse-patient relationship, implicitly criticizes any approach that prioritizes technical efficiency over human sensitivity. In an era where direct contact with patients can be mediated by machines, there is a risk that care will become progressively more distant and mechanical. Thus, Wiedenbach's warning about the importance of a person-centered nursing philosophy is essential to prevent the practice from becoming dehumanized⁵.

However, criticism of Wiedenbach's theory may stem from its emphasis on intuition and sensitivity as guides to practice. In a clinical setting increasingly driven by evidence and protocols, practice based on the nurse's subjective experience may be seen as outdated or



insufficient. However, it is important to remember that evidence-based practice and human sensitivity are not mutually exclusive. On the contrary, they can coexist in a complementary manner if technology is seen as a tool that supports, rather than replaces, the art of care⁶.

The application of Wiedenbach's concepts to modern nursing reinforces the importance of humanizing care, particularly in a technological environment. In situations where technology predominates, such as in intensive care units or when using remote monitoring, the nurse must act as a mediator between the machine and the patient, ensuring that the human aspect of care is not neglected. Thus, the Clinical Nursing Role Theory serves as a theoretical anchor that can guide professionals in the search for a balance between technological innovation and respect for individuality and dignity.

Results and Discussion

Contemporary nursing finds itself in a transitional period marked by the rapid expansion of digital technologies in healthcare. Tools such as artificial intelligence (AI), remote patient monitoring, and robotics are revolutionizing the way care is delivered. These advances offer greater diagnostic accuracy, real-time monitoring, and the possibility of more agile interventions. However, the introduction of these technological innovations also poses significant challenges to the traditionally human-centered care model. The risk of dehumanizing care, as interactions become mediated by machines, demands critical reflection on the role of nurses in this new scenario⁷.

Technological advancements, particularly in the fields of artificial intelligence and automation, have been widely praised for their ability to improve clinical outcomes and streamline processes. Remote monitoring devices, for example, allow continuous monitoring of vital signs without the need for a nurse to be physically present, while AI algorithms can aid in the early detection of clinical complications. However, these innovations also have the potential to distance nursing professionals from direct patient contact, replacing human interactions with digital interfaces^{7,8}.

The inherent risk of this trend is that it reduces the nurse's role to that of a mere performer of technical functions, limiting their ability to establish an empathetic and meaningful connection with the patient. Such a shift can compromise the humanization of care, one of the fundamental pillars of nursing practice. An overreliance on technological tools can obscure the perception of patients' subjective and emotional needs, which are often not captured by sensors or algorithms⁷.

According to Wiedenbach, the central purpose of nursing is to meet the perceived needs of the patient, something that requires more than simply performing technical tasks. This care cannot be replaced by machines or automated processes, as it involves a level of sensitivity and intuition that can only be achieved through human interaction⁶.

The growing reliance on technology in nursing creates a dichotomy between technical efficiency and the

humanization of care. While technology brings clear benefits, such as improved diagnostic accuracy and the automation of repetitive tasks, it can also reduce the time and attention dedicated to direct, personalized care. Nursing practice, as Wiedenbach warns, must maintain a constant focus on patients' perceived needs, which often go beyond physical aspects and include emotional, psychological, and spiritual dimensions^{3,7}.

The dichotomy between the use of technology and the preservation of humanized care is evident in various areas of clinical practice. In intensive care units, for example, nurses often find themselves overwhelmed by the amount of information generated by monitoring devices, leaving less room for direct interaction with patients and their families. Similarly, in home care, telemedicine and remote monitoring systems offer convenience, but they also create a physical and emotional distance that can hinder the establishment of therapeutic bonds^{3,7,8}.

Along these lines, Wiedenbach's theory leads us to question whether the growing use of technology is truly serving nursing's purpose or distorting its essence. While technologies can aid care practice, nurses must act as critical mediators, ensuring that the use of these tools serves to enhance, not replace, humanized care. This requires a reflective and ethical approach.

Given this scenario, it is essential to reflect on the role of nurses as facilitators of the humanization of care in a technological environment. Wiedenbach's view that nursing care should be intentional, guided by nursing philosophy, and focused on individual needs offers a theoretical and critical foundation for addressing contemporary challenges. Technology, no matter how advanced, cannot replace the empathic perception that nurses develop in daily practice^{3,4,7}.

Nurses must act as mediators, integrating available technologies to improve care without losing sight of the centrality of the human relationship. Rather than allowing technology to create barriers, professionals should seek to use it to expand their ability to provide more holistic care. For example, remote monitoring systems can allow nurses to spend more time interacting directly with patients, rather than focusing on technical tasks that could be delegated to technology. Similarly, artificial intelligence can aid in the early identification of risks, allowing nurses to focus on more complex and personalized interventions⁸.

Wiedenbach's theory emphasizes that nursing practice must be deliberate and guided by a clear purpose. In this sense, the use of technologies should always be guided by the fundamental question: "Is this truly benefiting the patient?" If the answer is no, it is necessary to reevaluate the role of these tools in clinical practice. Humanized care depends on the nurse's ability to integrate the patient's physical, emotional, and spiritual needs, and this integration can only be achieved through intentional, personal, individualized, respectful, ethical, transparent, and reflective practice, as advocated by Wiedenbach.

Ongoing technological transformations require a reassessment of nursing practices so that they can integrate



with new tools without compromising the quality of human-centered care⁹.

The theory discussed here states that nursing care is more than just performing tasks or applying pre-established interventions. The focus is on the individualized perception of the patient's needs, a perception that involves clinical judgment, empathy, and a holistic understanding of the human being. Thus, one of the most important implications for practice is the need for nurses to act as facilitators of humanization, even in a highly technological environment. The nurse must act as a mediator, ensuring that the use of technology does not reduce the patient to a set of clinical data or a vital signs machine^{6,8,9}.

The humanization of care, as advocated by Wiedenbach, must be a priority in any technological intervention. This means that, in clinical practice, nurses need to develop a refined sensitivity to balance the use of digital tools with the need to maintain meaningful interactions with patients. Such practice requires not only technical knowledge but also interpersonal skills and the ability to establish a relationship of trust, effective communication, and understanding. This combination is what will allow nurses to use technologies to their advantage, without losing sight of nursing's main objective: to meet perceived needs, not just objective clinical needs^{6,7}.

Another fundamental aspect of practice is the development of technical and ethical skills related to the use of new technologies. Their use requires not only technical knowledge but also a critical understanding of the implications of these tools for nursing care. In this sense, professional training must go beyond technical training; it must include a deep reflection on how technology impacts the nurse-patient relationship and the autonomy of nursing professionals, in addition to logical, critical, and clinical reasoning, which is being lost^{7,9}.

Practice should therefore be guided by continuing education programs that empower nurses to use technologies critically and ethically, ensuring that these tools enhance care without compromising humanization. These programs should include discussions on Wiedenbach's theory and other nursing theories that reinforce the importance of maintaining intentional, patient-centered care. Furthermore, continuing education must address the real practical importance of developing interpersonal skills, such as empathic communication, active listening, and strengthening the therapeutic bond, which are necessary for care practice^{6,7,9}.

Nurses must maintain critical autonomy in the face of technological innovations. This means that nursing professionals should not passively accept the use of new technologies, but rather actively evaluate their applicability and impact on the care of each patient, remaining faithful to the ethical principles that govern the profession, and basing this decision-making on their technical and scientific knowledge⁸.

One of the most important ethical implications relates to technology-mediated clinical decision-making. With the introduction of artificial intelligence systems that can suggest diagnoses or treatments, there is a risk that

nurses will become overly reliant on these systems, weakening their clinical judgment and professional autonomy. To manage this risk, nurses must adopt a reflective and ethical stance, question the limitations of technologies, and ensure that clinical decisions are based on a holistic understanding of the patient, as recommended by Wiedenbach^{4,9}.

Furthermore, nurses must act as advocates for patient rights, ensuring that the technologies used do not violate individuals' privacy, dignity, or autonomy. In an environment where patient data is constantly collected and analyzed by monitoring devices, protecting confidentiality becomes a central responsibility of nurses. Therefore, nurses must be able to identify and report potential ethical violations in the use of technologies, contributing to the creation of a care environment that respects the principles of beneficence, non-maleficence, autonomy, and justice^{9,10}.

The integration of technology into healthcare practice should be seen as an opportunity to expand the scope and efficiency of care, provided it is used judiciously and thoughtfully. Nursing practice, considering Wiedenbach's theory, must remain focused on the fundamental purpose of meeting patients' perceived needs. This implies that nurses must be able to adapt the use of technologies to the specificities of each healthcare context and each patient, avoiding excessive standardization and distancing themselves from the subjective dimensions of care. For example, the use of remote monitoring systems can be beneficial for patients with chronic conditions who require constant monitoring, but nurses must be careful not to replace in-person monitoring, which is often essential for the patient's emotional comfort and sense of security, as well as for performing physical examinations, which are essential for healthcare practice. Similarly, artificial intelligence can assist in analyzing large volumes of clinical data, but nurses must always critically evaluate the recommendations generated by these tools, ensuring they are aligned with the individual needs of each patient^{3,7-10}.

Final Considerations

This reflective study, based on Ernestine Wiedenbach's theory, critically addressed the impact of technology on nursing practice, highlighting the importance of maintaining intentional and humanized care in a rapidly changing environment. The analysis suggests that, although technological tools have the potential to improve care, there is a risk of dehumanization if the focus falls exclusively on interventions mediated by digital devices, to the detriment of direct interaction with the patient. Wiedenbach's theory reinforces that the nurse must act as an active agent, capable of interpreting and responding to the patient's perceived needs, preserving the humanistic essence of the profession.

Despite the theoretical contributions offered, this study has some limitations. First, because it is a theoretical reflection, it does not include direct evidence on contemporary clinical practice, which limits the generalizability of the conclusions to different healthcare contexts. Furthermore, the focus on Ernestine Wiedenbach's



theory, while relevant to reinforcing the humanization of care, does not encompass other theoretical perspectives that could also enrich the discussion, such as more contemporary approaches related to technology and healthcare. The rapid evolution of technologies in nursing may mean that some aspects discussed require constant updating as innovations emerge.

For academia, this study contributes by reviving and applying the principles of Wiedenbach's theory in a contemporary technological context, a movement that encourages new perspectives on classical nursing theories. It also challenges researchers to critically reflect on the interactions between health technologies and the theoretical foundations that guide practice. By integrating technology with a humanistic approach, academia can deepen debates on how classical theories can be revisited and adapted to current care needs, paving the way for future research that connects ethical, technical, and educational aspects. In clinical practice, the implications of this study are profound. Nurses are called to adopt a critical stance regarding the use of new technologies, ensuring that these tools are used as allies, without compromising clinical

judgment and the individuality of patients. The reflection proposed here can serve as a guide for nurses seeking to balance the efficiency offered by technological innovations with the need to maintain a practice centered on humanization. Continuing education programs, based on the discussions in this study, can be designed to ensure that nursing professionals develop both technical and ethical competencies, promoting more integrated and comprehensive care.

Society, increasingly impacted by health technologies, directly benefits from reflections such as the one proposed in this study. In a world where healthcare is becoming increasingly technological and automated, it is vital to ensure that human interaction is not lost. The study serves as a warning of the need for public policies and professional guidelines that regulate the use of technologies in healthcare, ensuring that patients' dignity, autonomy, and privacy are always protected. Furthermore, it reinforces the role of nurses as advocates for patients' interests, mediating the appropriate use of technology for individual and collective well-being.

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