














CASE REPORT

Ethical dilemma in nursing care for patients with limited mobility

Dilema ético en la atención de enfermería a paciente con movilidad limitada

Jeannette Mercedes Acosta Nuñez^{1,2}  , Jonathan Ramon Arias Huacho³  , Vicente Joel Fajardo Sánchez³  , Sofia Elizabeth Hurtado Méndez³  , Cinthia Karina López López³  , Viviana Jazmín Parrales Villacreses³  , Rosario Elizabeth Abril Beltrán²  , Marlene Elizabeth Cumbajin Montatixe²  , Carmen Alicia Llerena Cruz²  , Diana Carolina Campaña Guamani²  

¹Dirección de Investigación y Desarrollo. DIDE. Universidad Técnica de Ambato.

²Universidad Técnica de Ambato, Facultad de Ciencias de la Salud, Posgrados. / Carrera de Enfermería.

³Universidad Estatal de Milagro. Posgrado. Maestría en Enfermería con mención en Cuidado Crítico. Milagro - Ecuador.

Cite as: Acosta Nuñez JM, Arias Huacho JR, Fajardo Sánchez VJ, Hurtado Méndez SE, López López CK, Viviana Jazmín Parrales Villacreses VJ, et al. Ethical dilemma in nursing care for patients with limited mobility. Salud, Ciencia y Tecnología. 2025; 5:1702. <https://doi.org/10.56294/saludcyt20251702>

Submitted: 22-10-2024

Revised: 07-01-2025

Accepted: 05-06-2025

Published: 06-06-2025

Editor: Prof. Dr. William Castillo-González 

Corresponding Author: Jeannette Mercedes Acosta Nuñez 

ABSTRACT

Introduction: this article analyzes the ethical dilemma in nursing care for patients with limited mobility through a case study. The limitation of mobility in bedridden patients leads to the development of pressure ulcers. A case is presented of a 53-year-old man who, on the sixth day of hospitalization for a femur fracture that caused limited mobility, developed a grade II pressure ulcer during his course of care.

Method: the information for this work was obtained through a case report, using a descriptive cross-sectional study with an observational study factor and a prospective chronology.

Results: the violation of several bioethical principles was identified: justice for the inequality in the allocation of resources, beneficence for the omission of basic care, non-maleficence for the unnecessary suffering caused and autonomy for not allowing the patient to express his or her needs for preventive actions.

Discussion: the violation of bioethical principles in the hospital setting involves a transgression of the essential values guiding medical ethics, and this violation is more common than often believed.

Conclusion: the breach of bioethical principles can have negative consequences for both patients and families, making it crucial to implement preventive measures to avoid complications.

Keywords: Bioethics; Pressure Ulcer; Nursing Care; Limitation of Mobility; Case Reports.

RESUMEN

Introducción: el presente artículo analiza el dilema ético en la atención de enfermería a pacientes con movilidad limitada a través de un estudio de caso. La limitación de movilidad genera en pacientes encamados la aparición de úlceras por presión. Se presenta el caso de un hombre de 53 años que al sexto día de estancia hospitalaria bajo el diagnóstico de fractura de fémur el cual provoca una movilidad limitada del paciente y durante su evolución se evidencia una úlcera por presión de grado II.

Método: La información de este trabajo fue obtenida mediante un reporte de caso, a través de un estudio descriptivo de manera transversal con un factor de estudio observacional y de cronología prospectiva.

Resultados: se identificó la vulneración de varios principios bioéticos: justicia por la desigualdad en la asignación de recursos, beneficencia por la omisión de cuidados básicos, no maleficencia por el sufrimiento innecesario causado y autonomía por no permitir al paciente expresar sus necesidades para acciones preventivas.

Discusión: la violación de los principios bioéticos en el ámbito hospitalario implica una transgresión a los valores esenciales que guían la ética médica y esta vulneración es más frecuente de lo que se cree.

Conclusión: la vulneración de los principios bioéticos puede tener consecuencias negativas para pacientes y familias, por lo que es crucial tomar medidas preventivas para evitar complicaciones.

Palabras claves: Bioética; Úlcera por Presión; Atención de Enfermería; Limitación de la Movilidad; Informes de Casos.

INTRODUCTION

Bioethics addresses ethical dilemmas in areas such as the environment, research, education, and healthcare, facilitating responsible decision-making. In this context, bioethical principles are established in healthcare to ensure an ethical approach to medical practice.⁽¹⁾ In the exercise of their care, nurses must prioritize ethical values for the benefit of the patient's well-being, applying these principles through adequate training in bioethics.⁽²⁾ Since its inception, nursing, consolidated as a science thanks to research, has maintained a constant commitment to morality, the defense of patient rights, and common ethical principles.⁽³⁾ The history of nursing has evolved from an ethic based on virtue and submission to a code based on respect and scientific knowledge.

The fundamental ethical principles in healthcare include non-maleficence, beneficence, autonomy, and justice.⁽⁴⁾ The principle of non-maleficence positions nurses as responsible professionals whose objective is to avoid causing harm, and in the event of an error, measures must be taken to minimize its consequences, protecting the patient's physical, social, and psychological integrity.⁽⁵⁾ On the other hand, beneficence seeks to promote the patient's well-being and prevent errors by action or omission. In adverse events, nurses must act in the patient's best interests, ensuring timely notification and priority care, reflecting values such as compassion, empathy, and solidarity.^(6,7)

The principle of autonomy encourages action based on knowledge and without coercion, ensuring that the patient receives clear information and obtains consent at all stages of care. In an error, measures must be taken to repair the damage and provide adequate information.^(8,9) Finally, the principle of justice requires the equitable distribution of health resources. It is violated when these are misallocated or a punitive approach is adopted that increases costs. It is also compromised when unsafe actions affect vulnerable populations or hinder access to care.^(10,11)

Ethical principles in nursing are fundamental to guiding professional practice and ensuring that the care provided is respectful, fair, and humanized. Nursing is a social profession focused on helping, serving, and caring for people's health. Therefore, this study aims to establish the ethical dilemma in nursing care for patients with limited mobility. Bioethics is essential in nursing and is part of human beings and their existence. The interest in addressing bioethical principles arises from the ethical dilemmas in the health field, mainly due to advances in biomedicine and technology.⁽¹²⁾ The topic addressed deals with bioethics and nursing care related to pressure injuries, and the interaction between them will be analyzed.

Nursing is a healthcare-oriented profession integrating science and art to ensure high-quality, respectful, and human-centered care.^(13,14) It has undergone significant changes in its practices, constantly focusing on improving the quality of care, particularly in highly complex units where medical and technological advances are rapidly evolving.⁽¹⁵⁾ This humanized care is essential to prevent complications such as pressure ulcers.⁽¹⁶⁾

Pressure ulcers (PUs) are skin lesions that prolong hospital stays and increase healthcare costs, were 95 % are preventable, reflecting a deficit in the quality of care.⁽¹⁷⁾ Common in bedridden patients, they are caused by pressure, friction, or moisture, affecting the skin and underlying tissues.⁽¹⁸⁾ The WHO considers them an indicator of the quality of care. From a holistic perspective, nursing focuses on preventing, diagnosing, and treating PU.⁽¹⁹⁾ Early identification of risk factors and implementing preventive strategies are key to avoiding their onset.⁽²⁰⁾

Several studies conducted in Ecuador have reported a high incidence of pressure ulcers in hospitalized patients with comorbidities such as hypertension, diabetes, and chronic kidney disease. According to the Norton Scale, 48 % of patients are at medium risk of developing these lesions. Key factors contributing to their appearance include lack of postural changes, skin dehydration affecting 49 % of patients, especially women, who account for 76 % of cases, and inadequate equipment, such as electronic beds and anti-bedsores mattresses.⁽²¹⁾

A study conducted at the Carlos Andrade Marín Hospital identified that many patients with pressure ulcers outside the medical area were between 55 and 78 years old, and many of these injuries were not acquired in the hospital unit. Until 2020, there was an increase in the reporting of adverse events, with multiple cases reported monthly in high-complexity healthcare institutions. Although health is a constitutional right, a

significant number of patients in the ICU develop pressure ulcers due to non-compliance with patient safety protocols.⁽²²⁾

Given the above, this article aims to analyse the ethical dilemma in nursing care for patients with limited mobility by studying a clinical case.

METHOD

This study was conducted using the case report method, following the guidelines established in the CARE Checklist,⁽²³⁾ which provides a structured framework for the rigorous and detailed presentation of clinical case reports. The methodology adopted is descriptive, as it documents a specific phenomenon without any intervention to analyze its characteristics, evolution, and context without manipulating variables, thus allowing a comprehensive understanding of the case.

The study follows a cross-sectional design, given that data collection was carried out simultaneously, allowing the phenomenon to be observed in its immediate context. It is also an observational study in which the factors analyzed were not modified but only recorded and evaluated. In addition, a prospective approach was adopted, as the information was collected as events unfolded in real-time, ensuring accurate and up-to-date documentation.⁽²⁴⁾

This case report addresses the ethical dilemma in nursing care for a patient with limited mobility, complemented by information from similar studies. Primary sources were used for data collection, including open-ended interviews with the patient and their family member, to obtain a comprehensive view of the care received. The clinical case analysis, its possible publication in scientific repositories, and the dissemination of the findings were carried out in strict compliance with established ethical principles. Informed consent was obtained and explained in detail to the patient and his legal representative. It was ensured that they fully understood the study's risks, benefits, and alternatives, giving their consent freely and voluntarily. In this way, the recommendations of the CARE Checklist ensured respect for and compliance with applicable bioethical principles.

CASE REPORT

This is a 53-year-old male patient from the parish of Tarqui, in the city of Guayaquil, who was admitted to the emergency department after receiving multiple gunshot wounds. On arrival, he had a Glasgow Coma Scale score of 15/15, indicating full consciousness. During the physical assessment, the following injuries were identified: bullet entry and exit wounds in the left forearm, a wound with an entry and exit hole in the right thigh, an exit wound in the buttock, and a fracture of the greater trochanter of the right femur, confirmed by X-ray. In addition, there was a fracture of the lower epiphysis of the left radius and ulna. Upon admission, the patient's vital signs were within normal parameters. His nutritional status measurements were weight: 75 kg, height: 1.69 m, BMI: 26.3, indicating mild overweight.

Hospital stay and progress: the patient was admitted to the trauma observation area after receiving gunshot wounds. He remained on a stretcher without an anti-bedsores mattress and with limited mobility due to his fractures. During his stay, the nursing staff avoided interacting with him and provided minimal care, limiting supervision and the application of essential preventive care.

On the sixth day of hospitalization, the nursing staff who started the new shift performed a physical assessment and detected a grade II pressure injury in the sacral region and right heel. The medical team was immediately notified, and the patient was transferred to an area equipped with specialized beds to prevent and treat pressure injuries.

Personal situation and patient perception

The patient expressed dissatisfaction with the care received, stating that the nursing staff and the medical team were distant and indifferent. He noted that he did not receive wound care or assistance with position changes, factors that, according to him, directly contributed to the development of the pressure injury. He also stated that he feels belittled and perceives that the healthcare staff fears him due to his involvement in a shooting. According to the patient, this situation affected the quality of care provided. In response to this complaint, the head of the department initiated an investigation to determine how the pressure injury originated and why adequate preventive care was not implemented despite the patient's high vulnerability.

Clinical Results Through Analysis of the Principalissimo

The principle of autonomy implies respecting the patients' decisions, values, and rights, as well as ensuring their participation in decisions about their care. In this case, there is evidence of a violation of the principle of respect, as the patient did not have the opportunity to express his needs or preferences regarding preventive care, such as changes in position or necessary dressings to avoid complications. Additionally, there is no evidence that the healthcare team informed the patient or his representative about the risks associated with the lack of these preventive measures. This omission denies the patient his right to participate in his care and places

him in a position of vulnerability to negligent decisions by healthcare personnel. Autonomy also implies that the patient is treated as a whole human being, with dignity and respect, which was overlooked in this case. The principle of justice establishes that all patients have the right to receive equitable, dignified, and quality care, regardless of their condition.

In this case, the patient was harmed because he was not provided with the basic care necessary to prevent a serious complication such as a pressure ulcer. This suggests inequality in the distribution of resources or in healthcare personnel's allocation of time and effort. Furthermore, the fact that the patient perceived not receiving adequate treatment from healthcare professionals reinforces the lack of equity in his care. Justice not only implies equality in access to services but also humane treatment that respects the dignity of the patient, something that was ignored. This adverse event highlights the need to implement systems that guarantee justice in patient care, giving special priority to those in the most vulnerable situations.⁽²⁵⁾

The principle of justice in this patient's case, who suffered a gunshot wound that limited his care, implies ensuring that he receives adequate, equitable, and non-discriminatory medical care, similar to that which any other person outside the prison system would receive. This includes access to diagnosis, treatment, timely medical follow-up, and respecting his dignity and fundamental rights. In addition, it must be ensured that there are no limitations on care due to his condition and that he is provided with comprehensive medical services, considering his physical and psychosocial needs. This approach must align with international human rights standards, which require that persons deprived of liberty not be subjected to poor health conditions and that transparency and oversight in managing these services be guaranteed.⁽²⁶⁾

The principle of beneficence establishes that healthcare professionals must always act in the patient's best interests, seeking to promote their well-being and prevent harm. In this case, there is a systematic failure to provide basic care, such as position changes and regular wound dressing, which are essential to prevent the formation of pressure ulcers. Although simple, these actions directly impact the patient's quality of life and are a fundamental part of care for immobilized people.⁽²⁷⁾ The lack of these basic interventions demonstrates a lack of proactivity in protecting the patient's health and reflects a disregard for their physical and emotional well-being. Instead of benefiting the patient, the actions or inactions of the healthcare team contributed to a significant deterioration in his condition, which directly contradicts the principle of beneficence.

The principle of non-maleficence requires avoiding actions or omissions that could harm the patient. In this case, negligence in care caused avoidable physical harm: the development of a pressure ulcer. The lack of postural changes and adequate care caused unnecessary physical suffering, as well as an increase in the complexity of his clinical condition, which could have been avoided with basic preventive measures. This breach of the principle of non-maleficence is serious, as the harm caused was not the result of an unavoidable medical situation but of an apparent abandonment of responsibilities by the healthcare staff. Furthermore, the fact that the injury progressed without any intervention demonstrates a lack of monitoring and follow-up, prolonging the harm to the patient.⁽²⁸⁾

DISCUSSION

The patient, a 53-year-old man, was admitted to the hospital with a fracture of the greater trochanter of the right femur and fractures in the bones of the left arm. His mobility was severely impaired, leaving him in complete rest and with limited mobility. Although he had no relevant medical history, his current clinical condition put him at high risk of developing pressure ulcers. He presented risk factors with a body mass index (BMI) of 26.3, which placed him in the overweight category. Lack of mobility, prolonged hospitalization, and bed rest significantly increased the risk of developing pressure ulcers. In addition, the patient was hospitalized in an area without adequate resources to prevent this type of injury, which directly contributed to its development.

The development of the pressure ulcer on the sixth day of hospitalization, the patient developed a grade II pressure ulcer in the right pelvic region, indicating damage to the epidermis and part of the dermis.

These injuries are usually caused by prolonged pressure on an area of the body, which is common in patients with limited mobility. The absence of regular postural changes and adequate wound care by nursing staff directly contributed to the development of the injury. The patient expressed dissatisfaction with the care received, especially regarding the lack of postural mobilization and wound care. This complaint is key to understanding the ethical context of the case, as it raises questions about the quality of care provided and the responsibilities of healthcare personnel. Bioethical principles must be respected in all contexts, as they constitute the fundamental basis for guiding decisions and actions in the healthcare field.

However, these principles can be compromised in hospital practice, which can affect both patients and healthcare professionals. The violation of these principles implies a transgression of the essential values of medical ethics, such as human dignity, respect for life, equity in care, and the fair distribution of resources.⁽²⁹⁾

A study conducted in Mexico found that cases reviewed by the Bioethics Committee mainly involved young and middle-aged adults, ranging from complex ethical dilemmas to less serious but equally significant conflicts. Palliative care was one of the areas with the highest number of bioethical interventions, highlighting the

importance of bioethics in complex clinical decision-making, such as pain management and life prolongation.⁽³⁰⁾

The analysis focuses on the violation of each of the bioethical principles in this case. The principle of autonomy is seriously violated in this case, as the patient did not have the opportunity to express his wishes or preferences regarding preventive care essential to his well-being. This included fundamental aspects such as position changes and regular wound care, which should have been discussed with the patient or his legal representative.⁽³¹⁾

Furthermore, there is no evidence that the healthcare team adequately informed the patient or his representative about the risks and consequences of omitting these preventive measures. This lack of information reflects a severe failure in the shared decision-making process, jeopardizing the patient's health and autonomy.

A study at the IESS Portoviejo evaluated the application of the principle of autonomy through patient surveys. Although the majority indicated that some aspects of their independence were respected, a significant proportion did not receive sufficient information about their illness.⁽³¹⁾ This demonstrates that poor communication directly impacts the patient's ability to participate actively in their treatment. The principle of justice was violated, as the patient did not receive the basic care necessary to prevent serious complications such as pressure ulcers. This omission suggests an unequal distribution of resources and an inadequate allocation of time and effort by healthcare personnel.

Furthermore, the fact that the patient perceived that they had received unfair and discriminatory treatment reinforces the feeling of inequality in care. Justice in healthcare does not only imply equitable access to medical services but also dignified and respectful treatment.⁽³⁰⁾

A study conducted in Brazil on nursing care in palliative care showed that healthcare professionals recognize and respect patients' rights, ensuring fair and equal treatment in most cases.⁽³²⁾ However, this case highlights gaps in the equity of care, underscoring the need to improve resource allocation protocols and ensure equitable access to essential care.

The systematic omission of basic care by health personnel violates the principle of beneficence. Essential measures such as postural changes and regular wound care were not applied, which increased the risk of pressure injuries and compromised the patient's well-being.

In this context, a study conducted at the IESS Portoviejo showed that only half of the patients received self-care and injury prevention education.

This highlights that a lack of improvement and patient orientation can negatively impact the quality of care and contribute to the development of preventable complications. The principle of non-maleficence is violated by the lack of positional changes and inadequate care, which not only resulted in a preventable injury but also unnecessarily increased the patient's suffering.

The lack of basic preventive interventions exacerbated the complexity of his clinical condition.⁽³¹⁾ This finding is consistent with previous studies showing that many hospitalized patients express dissatisfaction with healthcare, reflecting deficiencies in applying bioethical principles.

CONCLUSIONS

- In this clinical case, fundamental bioethical principles were seriously violated, reflecting critical deficiencies in healthcare. The violation of the principles of autonomy and justice highlights a severe lack of communication and an unequal distribution of resources, directly affecting the quality of treatment and respect for the patient's rights. The omission of basic care and the lack of adequate information prevented the patient from exercising his autonomy. It increased the risks to his health, violating the principles of beneficence and non-maleficence.
- The unequal treatment and inadequate care compromised the patient's safety and reinforced his sense of injustice and discrimination, evidencing a violation of essential bioethical principles that should guide medical and nursing practice.
- It is essential to emphasize that the violation of bioethical principles can have negative consequences for the patient and their family members and healthcare professionals. This study is, therefore, highly relevant, as it seeks to promote improvements in the quality of care and contribute to reducing the incidence and prevalence of pressure ulcers. In this sense, it is hoped that this study will be helpful for both clinical practice and future research.
- This case highlights the ethical complexity of caring for patients with limited mobility. Consequently, it is essential to promote education on the proper management of postural changes and the application of preventive measures in pressure areas.
- Likewise, analyzing the patient's situation critically is necessary, promoting shared decision-making to ensure more humane and effective care. Finally, this study highlights the need for further research on the bioethical aspects of care to generate solid evidence to strengthen care practices and contribute to developing more equitable and effective health policies.

BIBLIOGRAPHICAL REFERENCES

1. Li SY, Yu Y, Zhen SJ, Xing ZJ, Gai X. Clinical study on the effect of whole course nursing intervention on critically ill patients and the occurrence of complications. *Indian J Pharm Sci* [Internet]. 2021 Jun 26 [cited 2025 Mar 6];0(0):73-6. Available from: <https://www.ijpsonline.com/articles/clinical-study-on-the-effect-of-whole-course-nursing-intervention-on-critically-ill-patients-and-the-occurrence-of-complications-4229.html>

2. Garzón Alarcón N. Ética profesional y teorías de enfermería. *Aquichan* [Internet]. 2005 [cited 2025 Mar 5];5(1):64-71. Available from: http://www.scielo.org.co/scielo.php?script=sci_arttext&pid=S1657-59972005000100007&lng=en&nrm=iso&tlng=es

3. Aldana de Becerra GM, Tovar Riveros BE, Vargas Y, Joya Ramírez NE, et al. Formación bioética en enfermería desde la perspectiva de los docentes. *Rev Latinoam Bioet* [Internet]. 2020 Apr 23 [cited 2024 Aug 1];20(2):121-42. Available from: http://www.scielo.org.co/scielo.php?script=sci_arttext&pid=S1657-47022020000200121&lng=en&nrm=iso&tlng=es

4. Taghiloo H, Ebadi A, Saeid Y, Jalali Farahni A, Davoudian A. Prevalence and factors associated with pressure injury in patients undergoing open heart surgery: A systematic review and meta-analysis. *Int Wound J* [Internet]. 2022 Aug 1 [cited 2025 Mar 5];20(6):2321. Available from: <https://pmc.ncbi.nlm.nih.gov/articles/PMC10333006/>

5. Alderden JG, Shibily F, Cowan L. Best Practice in Pressure Injury Prevention Among Critical Care Patients. *Crit Care Nurs Clin North Am* [Internet]. 2020 Dec 1 [cited 2025 Mar 5];32(4):489-500. Available from: <https://pubmed.ncbi.nlm.nih.gov/33129409/>

6. Colegio Internacional de Enfermería. El Código Deontológico del CIE para la Profesión de Enfermería revisado refleja las lecciones extraídas de la pandemia de COVID-19 | ICN - International Council of Nurses [Internet]. 2025 [cited 2025 Mar 5]. Available from: <https://www.icn.ch/es/noticias/el-codigo-deontologico-del-cie-para-la-profesion-de-enfermeria-revisado-refleja-las>

7. Garrafa V. Bioética y el derecho de acceso a los cuidados de salud. *Salud Colect* [Internet]. 2023 Oct 20 [cited 2025 Mar 5];19:e4491. Available from: <https://doi.org/10.18294/sc.2023.4491>

8. Yáñez Flores K, Rivas Riveros E, Campillay Campillay M. Ética del cuidado y cuidado de enfermería. *Enfermería: Cuidados Humanizados* [Internet]. 2021 Jun 11 [cited 2025 Mar 5];10(1):3-17. Available from: http://www.scielo.edu.uy/scielo.php?script=sci_arttext&pid=S2393-66062021000100003&lng=es&nrm=iso&tlng=es

9. Garza Hernández R, Meléndez Méndez C, Fang Huerta M de los A, González Salinas JF, Castañeda Hidalgo H, Argumedo Pérez NE. Conocimiento, actitud y barreras en enfermeras hacia las medidas de prevención de úlceras por presión. *Ciencia y enfermería*, ISSN-e 0717-9553, Vol 23, No 3, 2017, págs 47-58 [Internet]. 2017 [cited 2025 Mar 5];23(3):47-58. Available from: <https://dialnet.unirioja.es/servlet/articulo?codigo=9419524&info=resumen&idioma=SPA>

10. Blasco Mariño R, Estepa Calvo V. Paraparesis after embolization of abdominal aortic aneurysm sac. *Rev Esp Anestesiol Reanim*. 2021 Dec 1;68(10):614.

11. López Vélez LE, Zuleta Salas GL. El principio de beneficencia como articulador entre la teología moral, la bioética y las prácticas biomédicas. *Franciscanum: revista de las ciencias del espíritu*, ISSN 0120-1468, Vol 62, No 174, 2020 (Ejemplar dedicado a: *Franciscanum* 174), págs 1-30 [Internet]. 2020 [cited 2025 Mar 5];62(174):1-30. Available from: <https://dialnet.unirioja.es/servlet/articulo?codigo=7766532&info=resumen&idioma=ENG>

12. Peñaloza-Jaimes SD. Papel de la ética y la bioética en enfermería. *Revista Ciencia y Cuidado* [Internet]. 2022 Jan 1 [cited 2025 Mar 5];19(1):5-8. Available from: <https://revistas.ufps.edu.co/index.php/cienciaycuidado/article/view/3269/4086>

13. Alshammari YFH, Alharbi MN, Alanazi HF, Aldhahawi BK, Alshammari FM, Alsuwaydaa RH, et al. Critical care nursing. *Int J Health Sci (Qassim)* [Internet]. 2023 Dec 18 [cited 2025 Feb 27];7(S1):3224-34. Available from: <https://sciencescholar.us/journal/index.php/ijhs/article/view/14811>

14. Romero-Romero EA, Rosales-Maldonado TK, Sonia Elizabeth Chacón-Sevillano. El modelo teórico de Florence Nightingale y su relevancia en el cuidado de enfermería para el paciente crítico: una revisión bibliográfica. *MQRInvestigar* [Internet]. 2024 May 22 [cited 2025 Mar 5];8(2):2694-717. Available from: <https://www.investigarmqr.com/ojs/index.php/mqr/article/view/1369>
15. Rosales-Maldonado TK, Chacón-Sevillano SE, Romero-Romero EA. Explorando la eficacia de la teoría de Jean Watson en la atención de enfermería en la unidad de cuidados intensivos: un análisis crítico de la literatura científica. *MQRInvestigar* [Internet]. 2024 May 22 [cited 2025 Mar 5];8(2):2736-51. Available from: <https://www.investigarmqr.com/ojs/index.php/mqr/article/view/1371>
16. Mora Guillart L. Los principios éticos y bioéticos aplicados a la calidad de la atención en enfermería. *Revista Cubana de Oftalmología* [Internet]. 2015 [cited 2025 Mar 5];28(2):228-33. Available from: http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S0864-21762015000200009&lng=es&nrm=iso&tlng=es
17. Xu L, Sun Q, Feng J, Huang LJ, Xu C, Shen W, et al. Nursing Skill Assessment of Hospital Nurses in Management of Critically Ill Patients. *Appl Bionics Biomech* [Internet]. 2022 Aug 29 [cited 2025 Feb 7];2022:1-5. Available from: <https://typeset.io/papers/nursing-skill-assessment-of-hospital-nurses-in-management-of-2k1hky22>
18. Kurt Y, Kaşıkçı M, Malaska R. Nursing interventions to prevent pressure injury among open heart surgery patients: A systematic review. *Nurs Crit Care* [Internet]. 2024 Nov 1 [cited 2025 Mar 5];29(6). Available from: <https://pubmed.ncbi.nlm.nih.gov/38965753/>
19. Chello C, Lusini M, Schilirò D, Greco SM, Barbato R, Nenna A. Pressure ulcers in cardiac surgery: Few clinical studies, difficult risk assessment, and profound clinical implications. *Int Wound J* [Internet]. 2018 Feb 1 [cited 2025 Mar 5];16(1):9. Available from: <https://pmc.ncbi.nlm.nih.gov/articles/PMC7948616/>
20. Camacho Portocarrero EK. Detalles de: Prevalencia de úlceras por presión en pacientes ingresados en el Hospital Delfina Torres De Concha. > Catálogo en línea Koha [Internet]. [Esmeraldas]; 2017 [cited 2025 Mar 5]. Available from: https://catalogobiblioteca.puce.edu.ec/cgi-bin/koha/opac-detail.pl?biblionumber=257537&shelfbrowse_itemnumber=368065
21. Veintimilla Cedeño JB. Incidencia de úlceras por presión en una unidad de cuidados intensivos. Manta, Ecuador del 2019. *Dominio de las Ciencias*, ISSN-e 2477-8818, Vol 6, No 2, 2020 (Ejemplar dedicado a: Vol 6, No 2 (2020): Abril - Junio), págs 257-278 [Internet]. 2020 [cited 2025 Mar 5];6(2):257-78. Available from: <https://dialnet.unirioja.es/servlet/articulo?codigo=7398470&info=resumen&idioma=SPA>
22. Toapanta FMG, Terán AMV, Hinojosa MVA, Niza ALI, Cóndor MJS, Miketta ARG. Caracterización demográfica y epidemiológica de pacientes críticos con lesiones por presión en el Hospital de Especialidades Carlos Andrade Marín. *Revista Médica-Científica CAMBIOS HECAM* [Internet]. 2021 Dec 30 [cited 2025 Mar 5];20(2):19-24. Available from: <https://revistahcam.iess.gob.ec/index.php/cambios/article/view/728/510>
23. Case Report Guidelines. Lista de verificación de CARE: pautas para informes de casos de CARE [Internet]. 2025 [cited 2025 Mar 5]. Available from: <https://www.care-statement.org/checklist>
24. Hernández Sampieri R. Metodología de la Investigación [Internet]. Sexta Edición. INTERAMERICANA EDITORES; 2014 [cited 2024 Jun 23]. Available from: <https://www.esup.edu.pe/wp-content/uploads/2020/12/2.%20Hernandez,%20Fernandez%20y%20Baptista-Metodolog%C3%ADa%20Investigacion%20Cientifica%206ta%20ed.pdf>
25. Castelino F, Hephzibah D, Dayananda C, Shilpa Rani R, Geethanjali S, Shilpa H M, Sivya V, Wani ZA. Nursing Interventions to Prevent Pressure Ulcers in Critically Ill Patients: A Review of the Evidence. *Asian J. Res. Infecti Dis.* [Internet]. 2024 Jun 2 [cited 2025 Mar 5];15(6):34-43. Available from: <https://journalajrid.com/index.php/AJRID/article/view/354>
26. Neill S, Martin D. Nursing care bundles in the prevention of medical device related pressure ulcers: An integrative review. *J Tissue Viability*. 2024 Aug 1;33(3):376-86.
27. Tibenderana JR. From theory to practice: pressure ulcers in the spotlight, the crucial role of nurses' knowledge, attitude, and practice. *International Journal of Surgery: Global Health* [Internet]. 2023 Sep [cited

2025 Mar 5];6(5). Available from: https://journals.lww.com/ijsg/h/fulltext/2023/09010/from_theory_to_practice__pressure_ulcers_in_the.2.aspx

28. Saif F, kanwal A, Shoukat R. A cross-sectional análisis of knowledge and attitudes of nurses towards the prevention of pressure injuries. *Rev. Investig Cienc Biol Clin*. [Internet]. 2024 Jun 30 [cited 2025 Mar 5];2024(1):958. Available from: <https://bcsrj.com/ojs/index.php/bcsrj/article/view/958>

29. Maciej Serda, Becker FG, Cleary M, Team RM, Holtermann H, The D, et al. Synteza i aktywność biologiczna nowych analogów tiosemikarbazonowych chelatorów żelaza. G. Balint, Antala B, Carty C, Mabieme JMA, Amar IB, Kaplanova A, editors. *Uniwersytet śląski* [Internet]. 2013 [cited 2025 Mar 5];7(1):343-54. Available from: <https://desytamara.blogspot.com/2017/11/sistem-pelayanan-perpustakaan-dan-jenis.html>

30. Vera-Salmerón E, Domínguez-Nogueira C, Sáez JA, Romero-Béjar JL, Mota-Romero E. Differentiating pressure ulcer risk levels through interpretable classification models based on readily measurable indicators. *Healthcare* 2024, Vol 12, Page 913 [Internet]. 2024 Apr 27 [cited 2025 Mar 5];12(9):913. Available from: <https://www.mdpi.com/2227-9032/12/9/913/htm>

31. Nisa MU, Rafiq N, Ali A, Rizwan Z, Ilyas F, Fatima N. Evaluation of knowledge among nurses about pressure ulcer in a tertiary care hospital, lahore. *Journal of Health and Rehabilitation Research* [Internet]. 2024 May 8 [cited 2025 Mar 5];4(2):543-7. Available from: <https://jhrlmc.com/index.php/home/article/view/853>

32. Aiman UE, Saddique H, Jabeen R. Enfermería conocimientos y prácticas sobre la prevención de la úlcera por presión. *Revista de investigación en ciencias biológicas y clínicas* [Internet]. 2024 Sep 30 [cited 2025 Mar 5];2024(1):1150. Available from: <https://bcsrj.com/ojs/index.php/bcsrj/article/view/1150>

ACKNOWLEDGEMENTS

I would like to express my sincere gratitude to the Research and Development Directorate (DIDE) for its invaluable support and guidance during this research. Its contribution has been essential to the completion of this project, providing both the resources and guidance necessary to achieve the objectives set.

FUNDING

This study was made possible thanks to funding from the Research and Development Department (DIDE), whose support has been fundamental at every research stage. Its financial support has been key to achieving the objectives set, reflecting its commitment to scientific advancement and academic excellence.

CONFLICT OF INTEREST

The authors declare that they have no conflicts of interest.

AUTHOR CONTRIBUTIONS

Conceptualization: Jeannette Mercedes Acosta Nuñez, Carmen Alicia Llerena Cruz.

Data curation: Jeannette Mercedes Acosta Nuñez, Jonathan Ramon Arias Huacho.

Formal analysis: Jeannette Mercedes Acosta Nuñez, Vicente Joel Fajardo Sánchez.

Research: Jeannette Mercedes Acosta Nuñez, Sofia Elizabeth Hurtado Méndez.

Methodology: Jeannette Mercedes Acosta Nuñez, Cinthia Karina López López.

Supervision: Jeannette Mercedes Acosta Nuñez, Viviana Jazmín Parrales Villacreses.

Validation: Jeannette Mercedes Acosta Nuñez, Rosario Elizabeth Abril Beltrán.

Visualization: Jeannette Mercedes Acosta Nuñez, Marlene Elizabeth Cumbajin Montatixe.

Writing - original draft: Jeannette Mercedes Acosta Nuñez, Diana Carolina Campaña Guamani.