

NURSES ' PERFORMANCE IN PRESSURE INJURIES IN PATIENTS IN THE INTENSIVE CARE UNIT

ATUAÇÃO DO ENFERMEIRO NAS LESÕES POR PRESSÃO EM PACIENTES DE UNIDADE DE TERAPIA INTENSIVA

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ABSTRACT

Objective: Elucidate the role of nurses in the care of clients affected by pressure injuries in Intensive Care Unit beds. **Methods:** Integrative literature review, carried out through data collection in scientific articles in the LILACS, BDNF, and MEDLINE databases, in Portuguese, English, and Spanish, between the years 2015 to 2020. Titles, abstracts, and complete articles that responded to the proposed objective were read and classified as summaries of the results of the four selected papers. The search strategy followed the PICOS strategy according to PRISMA assumptions. **Results:** Pressure injuries represent a public health problem due to a large number of people with pressure injuries, however, everyone involved in the care must be aware of how to properly treat pressure injuries, in order to prevent them. It is necessary to promote an adequate, and permanent education for the acquisition of skills about action planning, starting with the assessment of it, as well as prevention and treatment. **Conclusion:** This study concluded that nurses have a crucial role in the treatment and application of measures to prevent pressure injuries. Therefore, this review has enabled a greater understanding of the main actions of nurses in pressure lesions, as well as the procedures to be adopted during the attendance to the patients with these wounds, always seeking the best care and best treatment possible. **Keywords:** Nursing; Pressure Injury; Intensive Care Unit.

RESUMO

Objetivo: Elucidar a atuação do enfermeiro no cuidado ao cliente acometido por lesões por pressão em leitos de Unidade de Terapia Intensiva. **Métodos:** Revisão integrativa da literatura, feita através de coletas de dados em artigos científicos nas bases de dados LILACS, BDNF e MEDLINE, em português, inglês e espanhol, entre os anos de 2015 a 2020. Realizou-se a leitura dos títulos, resumos e dos artigos completos que respondessem ao objetivo proposto e apresentaram-se as sínteses dos resultados dos quatro artigos selecionados. A estratégia de busca seguiu a estratégia PICOS conforme pressupostos do PRISMA. **Resultados:** As lesões por pressão representam um problema de saúde pública em virtude do grande número de pessoas com lesão por pressão, entretanto é importante que todos os envolvidos no cuidado tenham conhecimento de como tratar de maneira adequada as lesões por pressão, a fim de evitá-las. É necessário promover educação permanente adequada para aquisição de competências no que diz respeito ao planejamento de ações, iniciado pela avaliação ao planejamento de ações, como também a prevenção e o tratamento. **Conclusão:** Este trabalho concluiu que o enfermeiro tem papel crucial no tratamento e na aplicação de medidas de prevenção das lesões por pressão. Assim, essa revisão possibilitou uma maior compreensão das principais ações do enfermeiro na lesão por pressão, bem como dos procedimentos a serem adotados durante o atendimento aos pacientes com essas feridas, visando sempre o melhor atendimento e o melhor tratamento possível.

Palavras-chave: Enfermagem; Lesão por Pressão; Unidade de Terapia Intensiva.

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INTRODUCTION

Pressure lesion (PL) is a problem that is increasingly present in patients who are kept in hospital for a prolonged period, especially in the Intensive Care Unit (ICU). They are conceptualized as localized areas of cell necrosis that act on bone prominences exposed to pressure for a sufficient period to cause tissue ischemia. In the context of the ICU, due to the restrictions imposed on patients, such as being placed in a bed with venous access and often mechanical ventilation associated with severe clinical conditions and more complex therapies, patients become vulnerable to developing it (1, 2).

It is remarkable that public health in general faces huge problems concerning patient safety, there is cultural influence and available resources. Owing to this reality, Brazil, which is part of the World Alliance for Patient Safety, created by the World Health Organization (WHO) in 2004, instituted the National Patient Safety Program (PNSP) by the Ministry of Health, through Ordinance No. 529, of April 1, 2013, intending to quality health care in all health establishments in the national territory (3, 4).

It is elucidated that one of the challenges for the health service is the pressure injuries occurrence when they happen, they are considered an indicator of the quality of nursing care provided to patients. Its emergence can have negative implications for the patient, such as pain,

discomfort, and infections, which can worsen their health status and even lead the patient to death, as well as having implications for the institution that is offering the hospitalization, because the recovery process becomes slow, there is an increase in infection rates, consequently, there will be an increase in expenses for the treatment, the nursing dimensioning becomes more rigorous as more time is needed to provide care.

It was found that in situations of negligence in health care for patients with pressure injuries, the damage caused can result in death or permanent sequelae, increasing the cost and length of hospital stay. However, when the care provided is adequate, the focus on the patient's health and recovery is maintained, with a reduction in the incidence of the disease and a shortening of the treatment and/or hospitalization time³.

It is believed that, concerning the care provided by the nursing staff to ICU patients at risk of PL, it is necessary to have a frequency of changes in decubitus in order to reduce pressure on the body surface and maintain blood circulation. In consideration of this same physiological perspective, it is relevant to protect the bony prominences. Another essential practice is nutritional care, malnourished patients are more susceptible and twice as likely to develop skin lesions as PL. Be careful with the application of emollients to the skin, because they replace the barrier function resulting from the loss of natural lubrication³.

The occurrence records of Pressure Injury in critically ill patients in Brazil vary between 11% and 88%¹, an incidence above that published in the international literature, which is 4.9% to 25.1%⁵. According to the national report of incidents, this high number is related to assistance to health, so between January 2014 and July 2017, were reported 134 501 incidents; of which, 17.6% are referring to the occurrence of PL, stage III being prevalent in the notifications of the Patient Safety Centers (NSP) of the country's health services⁶.

Thus, the research aims to elucidate the role of nurses in the care of the patient affected by pressure injuries in Intensive Care Unit (ICU) beds.

METHODS

It is a bibliographic study of the integrative literature review type which, for its realization, were followed the following steps: identification of the theme and selection of the question; Establishment of inclusion and exclusion criteria for studies in the literature; Definition of information to be extracted from selected studies; Evaluation of the studies included and presentation of the review/synthesis of knowledge⁵.

The following guiding question, was considered based on this principle: What is the role of nurses in caring for patients with pressure injuries in Intensive Care Unit (ICU) beds? So articles were selected from 2015 to 2019, in the databases of Latin American

Literature/LILACS, Databases in Nursing/BDENF, and Medical Literature Analysis and Retrieval System online/MEDLINE in the languages: Portuguese, English, and Spanish. The inclusion criteria adopted were: articles published in Portuguese, English, and Spanish with the full texts available in the selected databases. The exclusion criteria were: articles in which it was not possible to identify a relationship with the theme, editorials, articles of review, and texts that required payment to access. The following descriptors crossed with the Boolean marker "AND" were used: Nursing, pressure injury, Intensive Care Unit; Nursing, Pressure ulcer, Intensive and Care Unit and Enfermería, Presión ulcer, Intensive Care Units.

A flowchart of the article selection process was formulated, in order to facilitate the understanding and help the construction of this study. The strategies used to search for articles were: Inclusion of descriptors; Identification of databases and papers with related topics; Screening (repeated titles, unrelated themes, deleted after reading); Eligibility and inclusion and exclusion criteria, based on the recommendations of the checklist of the Statement for Reporting Systematic Review and Meta-Analyses of Studies – PRISMA⁷.

The articles were read in full for descriptive and careful analysis. Then, the information from the studies taught was structured in an instrument created that

included: authors, title, objective, year, and periodical. Meanwhile, the other instrument used included: title, research methodology, level of evidence, and synthesis of results.

To categorize the evidence level, the type of study was considered, using a hierarchical classification into seven levels: level I: Evidence of a systematic review or meta-analysis of all relevant Randomized Clinical Trials (RCTs); level II: Evidence obtained from well-planned RCTs; level III: Evidence from well-designed controlled trials without randomization; level IV: Evidence from well-planned cases and cohort studies; Level V: Evidence from systematic reviews of descriptive and qualitative studies; Level VI: Evidence from unique descriptive or qualitative studies; Level VII: Evidence of the opinion of authorities and/or reports from expert committees⁸.

Due to the fact, it is an integrative literature review, that study did not require the approval of the Committee for Ethics in Research, however, were considered ethical

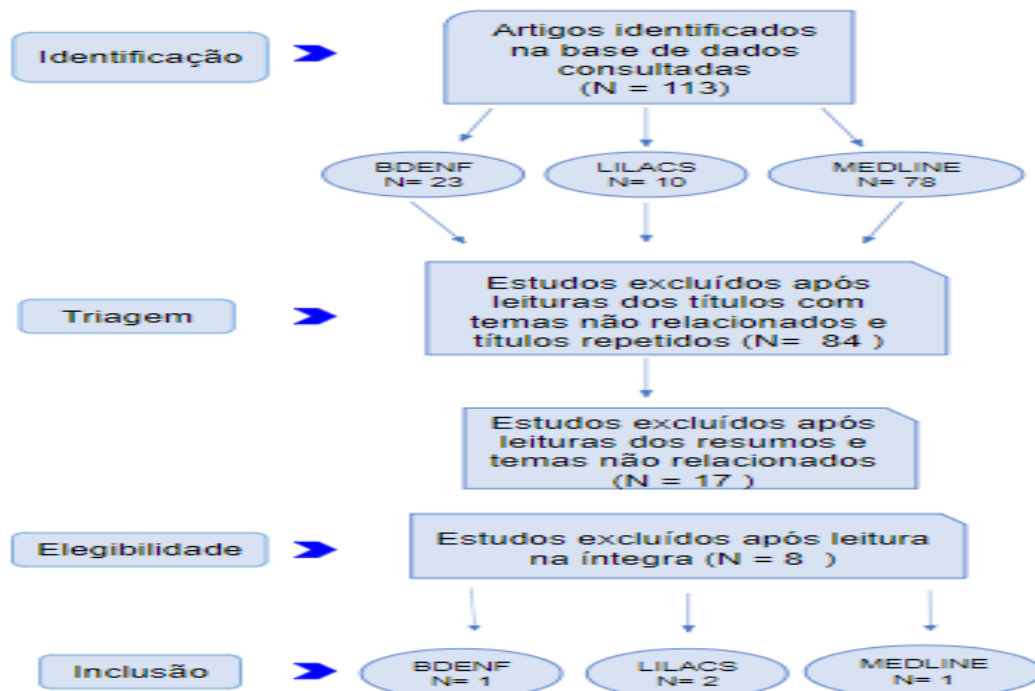
aspects as the quote of the authors of the articles.

RESULTS

It is noteworthy that, based on the crossing of descriptors in the selected databases, the initial research resulted in 113 publications. After the inclusion criteria were classified, 12 articles in Portuguese and English remained. 8 of them were excluded because they did not meet the eligibility criteria previously established, thus leaving 4 articles analyzed by reading in full text and included in this integrative review.

In addition, (n=1) articles were found in the BDENF database, (n=2) in LILACS and (n=1) in MEDLINE. Are predominant among publications the Portuguese (50%), English (50%) and Spanish (0%) languages.

Figure 1: Flowchart used for selection of studies and identification, prepared from the PRISMA recommendation . Caruaru/PE, 2021.



Source: The authors

Weddro 1: Characterization of studies following eligibility criteria and as conductive question. Caruaru, 2021 .

Id	Authors	Title	Objective	Anthe	Periodicthe
01	<u>Baron, Miriam Vivian</u> and ; <u>Reuter, Cézane Priscil a</u> ; <u>Burgos, Miria Suzan at</u> ; <u>Cavalli, Veniri a</u> ; <u>Brandenburg, Cristin and</u> ; <u>Krug, Suzane Beatriz Frantz</u> .	Experimental study with nursing staff related to the knowledge about pressure ulcers .	To compare the scores of knowledge in teams or not participating in educational interventions about pressure ulcers .	2016	<u>Am Rev Lat nursing m</u> ; 24: and 2831, 2016 11 21 .

2	<u>Vasconcelos, Josilene de Melo</u> <u>Buriti</u> ; <u>Caliri, Maria Helena</u> Larcher .	Nursing actions before and after an intensive care pressure injury prevention protocol .	Evaluate the actions of nursing professionals, before and after using a pressure injury prevention protocol in the Intensive Care Unit .	2017	<u>Esc Anna Nery</u> <u>Rev. Enfer. M</u> ; <u>21(1):</u> <u>e20170001,</u> <u>2017. tab b</u>
03	<u>Soares, Rhea Silvia</u> <u>Avilto</u> ; <u>Lima, Suzinara Beatriz</u> <u>Soares de;</u> <u>Camponogara, Silviamar;</u> <u>Eberhard</u> <u>Thaís Dresch</u> ; <u>Fonseca, Portellad</u> <u>Graziele Goreto</u> to ; <u>Kessler, Marcian</u> and	Meaning of the pressure ulcer protocol: qualifying nursing care management .	Understand the meaning of the Pressure Ulcer care protocol for nurses in the management of nursing care .	2017	<u>Nurse focus</u> <u>(Brasilia)</u> ; <u>8(3): 19-24,</u> <u>Nov.-2017. graf</u>

4	<u>Nahla Tayyiba Fiona Boyer, Peter A.Lewis</u>	Implementing a pressure ulcer prevention bundle in an adult intensive care	This study assess the implementation of a number of components of the high-impact intervention care package, aimed at preventing the development of UPs in the ICU, and evaluates the effectiveness of the strategies used to improve the conformity of the implementation.	2016	ScienceDirect (2016)
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Source: The authors

Weddro 2: Description of selected articles, after complete reading and according to the leading question. Caruaru/PE, 2021.

Id	Title	Methodology	Level of evidence	Summary of the result
01	Meaning of the pressure ulcer protocol: qualifying nursing care management.	The Complexity Theory was used as a theoretical framework and a qualitative study of the Data as a methodological framework.	Level IV	From the perspective of complex care , nurses rely on the protocol as an instrument that standardizes care, maintaining flexible and humane care, which is more subjective than objective at the time of its implementation, considering the expectations of patients. From the interconnection of the



				<p>categories, the central phenomenon unveiled that represents the Theoretical Matrix came to mean the Pressure Ulcer protocol as a qualification instrument for the managerial care of nurses.</p>
02	<p>Experimental study with nursing staff related to the knowledge about pressure ulcers</p>	<p>A quantitative study with an experimental design.</p>	<p>Level III</p>	<p>The strategies used to operationalize the educational intervention carried out in this study are important means for the dissemination of recommendations for the prevention of PU. They can be used by nursing managers, political managers, educators and researchers as facilitating strategies for the development and implementation of educational programs for the prevention of PU. Of the groups that participated, the result was 74.1% in the intervention group and 76.0% in the control group and, in the post-intervention moment , it was 87.0% in the group that underwent educational intervention, considering that the control group was 79.1% The group that presented educational skills did not reach an adequate mean of 90% of the test values.</p>



03	Implementing a pressure ulcer prevention bundle in an adult intensive care	A prospective observational study was used. Implementation strategies included regular education, training, auditing and feedback, and the presence of a champion in the ICU.	IV	The implementation strategies used showed a positive impact on conformity. Assessing implementation compliance is critical to achieving the desired result. Study participants demonstrated a high level of adherence to the implementation of the PU prevention package (78.1%), with 100% acceptance by the participants.
04	Nursing actions before and after an intensive care pressure injury prevention protocol.	Observational , prospective, comparative study, of the before and after type , with a quantitative approach, carried out in a teaching hospital in Paraíba. Nursing actions were observed during 38 bed baths before and 44 after the protocol .	IV	The results obtained in this study showed that the intervention for the construction and implementation of the LP prevention protocol, in partnership with the researcher and professionals, influenced the nursing professionals' adherence to the use of scientific evidence-based recommendations in the studied ICU.

Source: The authors

DISCUSSION

It is noteworthy that the patient's stay in the Intensive Care Unit (ICU) makes it

vulnerable to various procedures that are developed to stabilize some clinical conditions thus, during this period of stay, Pressure Injuries may arise. Its occurrence is



generally associated with a set of extrinsic factors such as pressure, friction, shear, and humidity; and intrinsic factors such as the nutritional deficit, presence of edema, age, immobility, and underlying pathology 9.

It is identified that after the analysis and the reading of the articles, the importance of discussing this theme about care became evident, especially the elaboration and implementation of measures to prevent pressure injuries. The application of the Braden Scale can become a great ally for nurses to increase the quality of service provided to people with pressure injuries, as it allows knowing their profile and directing the systematization of care. In order to become the use of the scale effect, the professional must be properly trained, ensuring that there are no limiting situations from the interpretations and scores of the evaluators' scores. For an adequate assessment, besides a structured approach, as in the case of Braden, clinical judgment is essential, in which one does not replace the other 10. Thus, the application of the Braden Scale by the professional nurse directs the nursing interventions in the prevention of Pressure Injury.

It is known that in the role of the nurse, adequate training is required to carry out skills in action planning, starting with assessment, prevention, and treatment, in addition to health education for patients and

their families, to improve the care provided, as well as the quality of life 11.

The development of this type of injury entails numerous negative consequences that reflect the physical and emotional suffering for the patient, in addition, it increases the risk of complications and comorbidities in the short, medium, and long term. For the health system, it results in higher costs associated with the need for a prolonged stay in the service, as well as higher investment in material and human resources for patient care 12.

It was observed that nurses demand adequate education to acquire skills concerning action planning, prevention, and treatment, in order to improve the care provided, as well as the patients' life quality. In this sense, the use of protocols in the management of nursing care for patients with LP are important tools and have an impact on controlling the incidence, reducing complications, length of stay, and reducing mortality associated with LP, however, they present high costs for its design, implementation, evaluation, and maintenance¹³.

It is understood that protocols assume the position of facilitator of care, they are routines and actions of care and management of health services or teams. They are instruments created from evidence-based practice that allow care according to the best

options and have an impact on the better quality and safer practices for the patient. Thus, nurses must be attentive to identify and face situations that require new strategies that contribute to the quality of care. It is considered a therapeutic scheme that guides the team regarding the evaluation and application of the most appropriate treatment for the patient's comprehensive rehabilitation. The assessment must take into account the cause, time of existence, presence or absence of infection in the lesion, and must follow a logical order of classification, choice of the appropriate dressing, accompaniment, and reassessment of the lesion, as well as the use of classification patterns of risks that help preventing the occurrence of these injuries, which cannot be treated only from what is possible to be seen, comorbidities and physiological changes, must be corrected in conjunction with local treatment (14, 15).

It is noteworthy that nurses have a fundamental role in the assessment and treatment of these injuries and must sensitize, encourage and train the team to follow defined standards of treatment, they also have the responsibility to foresee and provide human, material, and structural resources, and to implement preventive measures so that we can have better results 16.

The limitations presented were the number of current sources in the literature on the subject, indicating the production of studies with higher evidence methodologies in

the area, which corroborate more specific results in nursing care, from prevention and health promotion to continuity of a good quality of life during the PL treatment.

CONCLUSION

It is concluded that the nurse has a crucial role both in the treatment of pressure injuries, as well as in the choice of the most appropriate treatment and in the application of measures to prevent these injuries. Nurses must know the process that involves the treatment of the patient and that they develop a care protocol for patients with pressure injuries and that the entire team involved can follow the same standards of assessment and treatment.

It was evident that the analysis of the studies provided a reflection on the importance of nursing actions in customer care in the treatment of pressure injuries, as it demonstrates that their performance enables negative impacts, from the maintenance of health to the prevention of more severe complications. The studies identified were mostly from international publications, and even though the articles included are in Portuguese and English, Brazil's deficiency in investing in knowledge of how nurses work in this scenario is noticeable, as well as the need for levels of evidence for greater confidence that publications are as close to reality as possible. It should be noted that the limitations presented were the amount of current sources in the literature on the subject,

indicating the production of studies with higher evidence methodologies in the area, which corroborate more specific results in nursing care, from prevention and promotion of health to continuity and good quality of life during the PL treatment.

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