

The Holistic Vision of Nursing in the Management of Friction Injuries Supported by the Nursing Interventions Classification

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Abstract: The aging of the global population has led to an increasing incidence of skin tears (friction injuries/lesão por fricção) among hospitalized older adults, yet significant gaps in knowledge regarding prevention and holistic management of this condition persist among health professionals. This is a theoretical-reflective essay based on the academic and professional experiences of the authors, contextualized within the Brazilian nursing framework. No systematic inclusion/exclusion criteria were applied, and no delimited temporal scope was established, as the study draws upon theoretical foundations selected by the authors to address the topic comprehensively. The study identified three key risk factor domains for skin tears in older adults skin condition, mobility impairment, and general health status encompassing both intrinsic factors (age ≥ 60 years, polypharmacy, reduced skin turgor, impaired mobility) and extrinsic factors (inadequate bed linen, elevated headboard position, absence of a caregiver). A checklist tool was developed to enable systematic risk stratification (low, moderate, and high risk) and guide preventive nursing interventions aligned with the Nursing Interventions Classification (NIC) across four domains: basic physiological, complex physiological, behavioral, and safety. Holistic nursing care, grounded in structured assessment and evidence-based intervention, is essential to address skin tears in the elderly. The proposed checklist provides a simple, applicable tool to equip nurses, caregivers, and patients themselves for effective self-care and prevention of friction injuries in clinical and community settings.

Keywords: Skin tears; Frail elderly; Holistic nursing care; Friction injuries; Nursing interventions.

1. Introduction

The aging process is natural and inevitable for all individuals. According to a 2022 United Nations report, the world's population is aging, mainly due to increased life expectancy and reduced fertility rates. In Brazil, a person is considered elderly when they reach

the age of 60 or older, and this age group represents about 15.8% of the Brazilian population, with an average life expectancy of 75.5 years. According to DATASUS data, more than 1 million elderly people died in 2022, with 269,134 in the 60-69 age group, 333,230 in the 70-79 age group, and 495,283 in the 80 years or older age group (Brazil, 2003; IBGE, 2022; TABNET, 2024).

With the increase in life expectancy, the aging of the Brazilian population is redefining the country's epidemiological profile, accompanied by a proportional growth in the elderly population and an increasing demand for health services. This is due to the higher frequency of hospitalizations among the elderly compared to other age groups. In Brazil, the number of hospitalized elderly people reached one-third of the total hospitalizations during the last decade. Epidemiological research generally identifies clinical profiles of hospitalized elderly people, highlighting a high prevalence of cardiovascular and respiratory conditions as the main causes of hospitalization, in addition to a high rate of chronic diseases associated with the main clinical diagnosis (Barbosa, 2023).

This shift in the epidemiological profile reveals a population with multiple comorbidities, in which individuals often have two or more chronic conditions simultaneously, and the rise in chronic noncommunicable diseases (CNCDs) is a sign of the aging Brazilian population. Various factors, such as globalization, urban growth, smoking, alcohol consumption, physical inactivity, and an unbalanced diet, contribute to this reality. As a result, 72% of deaths in the country are caused by NCDs, which has negative impacts on public health and implies significant costs for both the healthcare system and individual patients (Bortoluzzi et al., 2021).

In the context of this shifting population age structure, an increase in the number of Friction Injury (FI) cases has been observed, associated with various risk factors present in the daily lives of debilitated patients, with population aging being one of the primary contributors. This condition negatively impacts quality of life due to the risk of associated infections, resulting in increased care costs for this population (Pinheiro et al., 2021). Friction occurs when the skin is rubbed against a surface such as vigorous contact with towels, bed linen, or other hospital devices resulting in injury to the epidermis and upper layers of the dermis (Brunner, 2023). The STAR Skin Tear Classification System was developed by Payne & Martin (1990) and revised by Carville et al. (2007) to conceptualize friction injuries. Older adults are the most susceptible to skin tears, primarily due to reduced functional capacity associated with histological changes in the skin, such as decreased skin thickness, hydration, elasticity, and resistance changes that intensify after the age of 75 (Galvão, Santos, and Faustino, 2021).

Considering the phenomenological changes in the Brazilian age demographic, with the substantial growth of the elderly population and the high incidence of NCDs in this group, a significant increase in hospitalizations has been observed often resulting in preventable outcomes which contributes to a decline in the quality of life and longevity of this population. These outcomes are compounded by deficiencies in the healthcare networks, creating conditions favorable to complications such as friction injuries (IBGE, 2022; Pinheiro et al., 2021).

Holistic care, conceived and championed by Myra Estrin Levine, an American nurse, reflects an approach that considers multiple facets of the human being from birth to death, particularly within the context of the Brazilian elderly population. Holism, in its etymological origin, encompasses a new vision of being one that considers the whole and its interconnections, without fragmentation, integrating scientific, artistic, philosophical, spiritual, familial, psychological, social, and self-related dimensions. Despite its theoretical foundation, the care model proposed by Levine still faces challenges in its implementation within healthcare systems, making the discussion of holism in elderly care all the more essential. In the context of skin injuries, nursing has the responsibility supported by legislation to establish goals, diagnose, and treat the elderly population holistically, regardless of the care setting: outpatient, hospital, or primary care (Beckman et al., 2020).

The aim of this study is to contribute to the existing literature on this subject by providing guidance and encouraging nursing professionals in the identification of friction injury risks and the promotion of preventive actions particularly given that this remains an underexplored topic while highlighting the importance of holistic care in the management of friction injuries..

2. Materials and Methods

This study is a theoretical-reflective essay grounded in the academic and professional experiences of the authors, who reflect on and contextualize the contribution of Brazilian Nursing in its holistic vision to expanding knowledge about skin tears (friction injuries) in older adults. The study is guided by the Nursing Interventions Classification (NIC) as its primary theoretical-practical framework, aiming to bridge existing gaps between clinical evidence and nursing practice in the prevention and holistic management of friction injuries among the elderly population.

Given the reflective nature of this study, no systematic literature search was conducted, and no specific inclusion or exclusion criteria were applied for the selection of references. The theoretical bases were selected by the authors according to their relevance to the subject matter, drawing upon foundational and contemporary works in gerontological nursing, wound care, and holistic care theory including the works of Myra Estrin Levine on holistic nursing and the STAR Skin Tear Classification System developed by Payne & Martin (1990) and revised by Carville et al. (2007). Accordingly, no delimited temporal scope was established, allowing the authors to incorporate both seminal and recent literature as appropriate to contextualize the topic comprehensively.

The content was organized around three central axes: (1) the epidemiological and physiological basis of skin tears in elderly patients; (2) the identification of intrinsic and extrinsic risk factors through a structured checklist tool developed by the authors; and (3) nursing diagnoses and interventions aligned with the NIC taxonomy, encompassing domains of basic physiological care, complex physiological care, behavioral support, and safety management. This organizational framework reflects the holistic care principles that underpin the study, ensuring that prevention, assessment, and intervention are addressed in an integrated and clinically applicable manner..

3. Results and Discussion

3.1. Skin Aging and Its Physiological Changes

With aging, individuals undergo physical and psychological changes that vary depending on the life context experienced by each person. One of the physical effects of this process is skin aging, which becomes increasingly fragile as a result of physiological and pathological alterations (Galvão, Santos, and Faustino, 2021). According to Spin et al. (2021), changes in the serum composition of dermal and epidermal tissue can reduce the moisture content of the skin surface and its tensile resistance, generating a risk of trauma.

The skin is a vital organ that prevents water loss, regulates hydroelectrolytic balance, controls body temperature, and receives sensory stimuli such as touch, pressure, temperature, and pain (Pereira, 2013). It is composed of three layers: the epidermis, the dermis, and the subcutaneous tissue. The epidermis is the outermost layer, consisting of keratinocytes, melanocytes, Langerhans cells, and Merkel cells. With the natural aging process, a reduction in epidermal thickness occurs, along with sensory decline, impaired physiological homeostasis, decreased dermal collagen, and reduced tissue elasticity. In addition, the skin becomes drier due to diminished activity of the sebaceous and sweat glands, leading to a weakened junction between the epidermis and dermis, which facilitates blister formation and predisposes the skin to injury (Hinkle, Cheever, and Overbaugh, 2023).

The skin of older adults presents specific characteristics that reflect its fragility. With aging, structural changes occur in the skin, including alterations in collagen fibers, a reduction in Langerhans cells, and decreased melanocyte density, resulting in loss of elasticity, resistance, and cutaneous stability. Furthermore, the dermo-epidermal junction weakens, making the skin less resistant to mechanical forces such as friction and shear, rendering the elderly person more susceptible to injury. Simultaneously, changes in the serum composition of dermal and epidermal tissue can reduce surface moisture and tensile resistance, increasing the risk of trauma. Modifications in tegumentary mechanical forces such as reduced production by the sweat and sebaceous glands contribute to dehydrated, dry, and inelastic skin, compounded by thinning of the subcutaneous layer, which reduces the skin's efficiency in absorbing mechanical impact (Galvão, Santos, and Faustino, 2021).

3.2. Definition of Friction Injury

Friction is a mechanical force that can lead to the development of pressure injuries. Friction occurs when two surfaces move against each other for example, when a patient is dragged against bed linen or a poorly adjusted medical device. Shear, on the other hand, is caused by a parallel force applied to the patient's body, such as the resistance between the patient and a chair or bed when the patient slides downward.

When shear occurs, tissue layers slide over one another, blood vessels become distended and twisted, and the microcirculation of the skin and subcutaneous tissue is disrupted. Evidence of deep tissue damage may develop slowly and manifest as a sinus tract (also called tunneling) an area of destroyed tissue extending from the wound edge resulting in dead space that is susceptible to abscess formation. The sacrum and heels are the areas most susceptible to the effects of shear. Pressure, friction, and shear injuries occur when the patient slides down in bed or is positioned or moved inappropriately (e.g., dragged upward in bed). Spastic muscles and the complete absence of movement increase the patient's vulnerability to pressure injuries related to friction and shear (Edsberg, Black, Goldberg et al., 2016).

3.3. Risk Factors for Skin Tears in the Elderly

Studies have identified two predominant categories of factors that predispose older adults to the development of friction injuries:

3.3.1. Intrinsic characteristics

Aging leads to a decline in skin function and its internal structures. Factors such as advanced age, white race, female sex, sun exposure, dehydration, malnutrition, medication use, cognitive impairment, and altered mobility increase the risk of skin problems, including senile purpura and friction and shear injuries. These risks are compounded when associated with dementia, reduced vision, and difficulties with ambulation. Health conditions such as cardiac, pulmonary, and vascular diseases also contribute to the development of these injuries. Prior wound healing and malnutrition evidenced by low serum albumin levels and reduced body mass index further increase the susceptibility to cutaneous injuries in the elderly population (Spin, 2021; Galvão, Santos, and Faustino, 2021).

3.3.2. Extrinsic characteristics

Vulnerability to external factors contributing to friction injury development requires the attention of the multiprofessional team. These factors are divided into two subcategories: mechanical traumas related to reduced functional capacity, and histological skin changes — such as decreased thickness, hydration, elasticity, and resistance — which are further intensified by exposure to moisture (Spin, 2021; Galvão, Santos, and Faustino, 2021).

3.3.3. Mechanical trauma

Increased skeletal muscle rigidity and muscular spasticity reduce sensory sensitivity, potentially increasing the risk of falls and the need for physical assistance in daily activities, thereby raising the risk of skin trauma.

3.3.4. Prolonged or repeated exposure to moisture

Routine exposure to urine, feces, and draining wounds, as well as the use of geriatric diapers, are factors documented in the literature as contributors to skin friction and shear. Additionally, inflammatory changes and the promotion of bacterial growth through increased pH can reduce the skin's barrier function and impair wound healing, generating local erythema and sensitivity, which further contributes to progressive skin loss due to prolonged exposure.

3.4. Classification of Skin Tears (Grades of Friction Injury)

To categorize traumatic skin lesions with an etiology resulting from the combined action of friction and shear forces, an internationally recognized nomenclature is adopted. The term "skin tear" refers to a wound caused by the separation of the epidermis from the dermis, or the segmentation of both underlying structures. Skin tears are classified into three types (Payne & Martin, 1990):

Table 1. Types of Skin Tears

Type	Description
Type 1	Skin flap tear without loss of skin structure
Type 2	Partial loss of the skin flap
Type 3	Total loss of the skin flap, exposing the wound bed

Source: Authors, 2025.

3.5. Identification Of Risk Factors For The Development Of Skin Tears

The identification of risk factors for skin tears is a fundamental step in guiding preventive nursing care. These risk factors are organized into three essential domains: skin condition, mobility, and general health status (Beeckman et al., 2020; Galvão, Santos, and Faustino, 2021). A thorough and systematic assessment across these domains enables nurses to stratify patient risk levels and implement targeted interventions before injury occurs.

3.5.1. Domain 1 Skin Condition

Skin assessment is the first and most direct domain of risk identification. The nurse should evaluate whether the patient has a history of previous skin tears, as recurrence is significantly more likely in individuals who have experienced prior episodes. In addition, the assessment should determine whether the skin presents characteristics of dryness, fragility, reduced elasticity, or increased vulnerability to mechanical forces. The presence of senile purpura, ecchymoses, or areas of thinning and translucency are clinical indicators of heightened susceptibility to accidental trauma. Regular and structured skin inspection — particularly in pressure-prone and friction-prone areas such as the upper limbs, sacrum, and lower extremities — is essential for early risk detection (Beeckman et al., 2020; Galvão, Santos, and Faustino, 2021).

3.5.2. Domain 2 Mobility

Impaired mobility represents one of the most significant risk factors for skin tears, as it directly increases the likelihood of mechanical trauma during routine care activities. When

difficulties or inability to perform activities of daily living (ADLs) are identified — including turning in bed, transferring, ambulating, or repositioning — special attention must be given to ensuring adequate and technically appropriate physical assistance. The use of improper handling techniques, insufficient staff support, or inadequate assistive devices during patient mobilization substantially raises the risk of skin shear and friction injuries. Nurses and the multiprofessional team must be trained in safe patient handling to minimize unintentional skin trauma during care (Beeckman et al., 2020; Pinheiro et al., 2021).

3.5.1. Domain 3 General Health Status

Several systemic and clinical conditions can indirectly but significantly compromise skin integrity in older adults. Comorbidities such as diabetes mellitus, arterial hypertension, and urinary incontinence alter microvascular perfusion, skin pH balance, and surface moisture, all of which reduce the skin's natural resilience. Cognitive impairment limits the patient's ability to recognize discomfort or reposition themselves independently, increasing passive exposure to friction and shear forces. Malnutrition and dehydration — particularly when evidenced by low serum albumin levels and reduced body mass index — impair tissue repair mechanisms and reduce subcutaneous padding. Additionally, polypharmacy, common in the elderly population, may produce adverse effects such as skin thinning, increased bruising tendency, and impaired wound healing, further compounding the risk of skin tears (Beeckman et al., 2020; Spin, 2021; Galvão, Santos, and Faustino, 2021).

3.6. Checklist For Identifying Skin Tear Risk And Corresponding Care Actions

To support clinical practice, the authors developed an educational visual-memory tool designed to provide greater practicality, applicability, and direct benefit to patient care. This checklist synthesizes the key observable points for identifying individual risk levels and guiding preventive actions related to friction and shear injuries in older adults. It is intended to be used by nurses, caregivers, and when appropriate by patients themselves as part of self-care empowerment.

Table 1. Risk Factor Checklist for Skin Tears in Older Adults

RISK FACTORS FOR SKIN TEARS	
INTRINSIC RISK FACTORS	EXTRINSIC RISK FACTORS
<input type="checkbox"/> Age ≥ 60 years	<input type="checkbox"/> Absence of a companion
<input type="checkbox"/> Use of diapers	<input type="checkbox"/> Excessive furniture
<input type="checkbox"/> Impaired mobility	<input type="checkbox"/> Headboard ≥ 30°
<input type="checkbox"/> Decreased skin turgor	<input type="checkbox"/> Bed linen with chafing points
<input type="checkbox"/> Polypharmacy	<input type="checkbox"/> Lack of adequate hydration

≤ 3 factors = **LOW RISK**, 4 to 6 factors = **MODERATE RISK**, ≥ 7 factors = **HIGH RISK**
 Source: Authors, 2025.

3.7. Nursing Diagnoses And Preventive Care

In order to promote high-quality care for older adults, nurses must carry out the nursing process appropriately. When admitting individuals at extreme ages, it is important to consider their increased susceptibility to deficient fluid volume and to establish priority nursing diagnoses, such as Risk for Impaired Skin Integrity, defined as the susceptibility to alteration in the epidermis and/or dermis that may compromise health. This also includes all related clinical, biological, psychological, and social manifestations, considering and applying the principles of holistic care (NANDA, 2021).

3.8. Nursing Interventions Related To Skin Tears And The Support From The Nursing Interventions Classification (Nic)

For comprehensive practice, the use of the Nursing Process is essential, following its steps: assessment (nursing history/interview and physical examination), nursing diagnoses (ND), care goals, nursing interventions, and nursing outcomes. Nursing interventions are based on the NIC, which provides theoretical, innovative, and scientific support developed through Evidence-Based Practice (EBP). Within the NIC, three domains are aligned with nursing care and practice Domains 1, 2, 3, and 4 which correspond to the NIC in the table below. In this context, the nurse is qualified to implement interventions according to the taxonomies and their subclassifications. The NIC provides tools for nursing care and management of skin tears (STs).

Table 2. Nursing Interventions for Friction Injuries Consistent with NIC

Domain	Class	Nursing Interventions
DOMAIN 1: BASIC PHYSIOLOGICAL	Class D: Nutritional Support	<ul style="list-style-type: none"> • Nutritional counseling (5246) • Nutritional therapy (1120)
	Class E: Physical Comfort	<ul style="list-style-type: none"> • Pain management: acute (1410) • Therapeutic touch (5465)
DOMAIN 2: COMPLEX PHYSIOLOGICAL	Class H: Medication Management	<ul style="list-style-type: none"> • Topical medication administration (2136) • Teaching: prescribed medications (2390)
	Class L: Skin and Wound Management	<ul style="list-style-type: none"> • Wound care (3660) • Skin surveillance (3590)
DOMAIN 3: BEHAVIORAL	Class S: Patient Education	<ul style="list-style-type: none"> • Health education (5510) • Teaching: health/illness process (5602)
DOMAIN 4: SAFETY	Class V: Risk Management	<ul style="list-style-type: none"> • Infection control (6540) • Pressure injury prevention (3540)

Source: Authors, 2025.

3.9. Holistic Care Provided To Older Adults Affected By Skin Tears

Nursing practice, as a science, has advanced in the study of holistic approaches, aiming to provide comprehensive care that addresses the complexity of each individual. In this context, it is essential to establish skin-monitoring practices, such as assessing skin color and temperature, monitoring the appearance of pressure or friction sources, documenting changes in skin and mucous membranes, and, most importantly, using data-collection tools to identify patients at risk for skin breakdown, such as the Braden Scale.

Holistic nursing employs scientific knowledge, theories, investigations, and interventions based on practical experience. Within this scope, nursing practices play a complementary role in implementing holistic care. In holistic care, practice-based knowledge, intuition, and empathy are applied, enabling humanized actions toward the person who remains under nursing care.

Accordingly, holistic care requires nurses to reassess patients and their organic and psychosocial conditions within the context of aging. Interventions should be guided by international taxonomies and grounded in the conservation of energy and the maintenance of structural, personal, and social integrity—key pillars of holistic care. Each subsection includes indispensable considerations such as nutrition, sleep, rest, recreational activities, social interactions, the pursuit of personal goals regardless of age, medication management, and, in this regard, the protection of the patient's tissue integrity. Furthermore, efforts to maintain autonomy and support functional decline associated with aging are essential (Riegel et al., 2020).

In accordance with the Brazilian Association of Stomatherapy (SOBEST), cognitive care, individualized guidance tailored to the socioeconomic conditions of patients and caregivers, and education about the risks of friction injuries are essential. Safeguarding patients from intentional or unintentional self-injury, referring them to nutritionists or dermatologists, optimizing hydration, addressing weight extremes, and monitoring nutritional status are also indispensable. Medication monitoring—especially in the context of polypharmacy and its effects on skin health—with adjustments when necessary, is likewise part of nursing care (SOBEST, 2016).

3.10. Prevention

Considering the three axes of risk factors for the development of friction and shear injuries, we have a straightforward care pathway that directs our preventive efforts. Effective prevention requires recognizing risk factors and continuously monitoring changes in the patient's overall health to implement appropriate measures for each clinical situation.

Health professionals caring for older adults play a crucial role in holistic care by addressing the patient's physical, social, emotional, and spiritual needs. These professionals are essential in both preventing and treating friction injuries. A multidisciplinary team should provide individualized and humanized care, implementing preventive strategies and prescribing appropriate dressings based on the identified injury category. Nurses, who maintain close contact with patients, monitor lesion progression, and possess specialized clinical expertise in wound care, play a fundamental role in preventing and managing these injuries (Pinheiro et al., 2021).

Interprofessional collaboration during patient care contributes to effective prevention and treatment by offering a comprehensive and individualized care plan. Team collaboration supports therapeutic decisions that consider all dimensions of the patient's health and personal context.

4. Conclusions

The evidence presented in this study underscores the growing importance of equipping health professionals with comprehensive knowledge about friction injuries (skin tears) in order to effectively meet the emerging care demands of a rapidly aging hospitalized population. As Brazil's elderly demographic continues to expand and the prevalence of Non-Communicable Chronic Diseases (NCDs) rises in parallel, the incidence of skin tears is expected to increase correspondingly, making early identification and systematic prevention an urgent clinical and public health priority.

Preventive measures are primarily centered on four interconnected pillars: (1) maintaining organic and tissue homeostasis through appropriate nutrition and hydration, ensuring adequate serum albumin levels and body mass index to support skin integrity; (2) preventing mechanical trauma to fragile, aging skin by ensuring a safe care environment equipped with suitable devices, protective padding, and technically sound patient-handling practices; (3) organizing nursing care through structured processes, including systematic risk assessment using validated tools such as the checklist proposed in this study; and (4) delivering targeted health education focused on skin care in older adults, directed at professionals, caregivers, and patients themselves, fostering self-care competence and reducing preventable harm.

Furthermore, the Nursing Interventions Classification (NIC) provides a robust and internationally recognized taxonomic framework that supports nurses in planning, implementing,

and documenting holistic, evidence-based care for patients at risk of or affected by skin tears. The alignment of nursing diagnoses (particularly Risk for Impaired Skin Integrity) with NIC interventions across physiological, behavioral, and safety domains reflects the comprehensive nature of nursing practice and its central role in preventing adverse outcomes in the elderly.

Holistic care, as theorized by Myra Estrin Levine and reinforced throughout this study, is not merely a philosophical ideal but a practical and necessary approach to improving outcomes for older adults with skin tears. By integrating scientific knowledge, individualized assessment, interprofessional collaboration, and patient-centered education, holistic nursing care serves as the most effective instrument for reducing the incidence, severity, and associated costs of friction injuries ultimately preserving the quality of life, autonomy, and dignity of the elderly population under nursing care.

The checklist proposed in this study represents a direct and practical contribution to nursing practice, offering a simple, low-cost, and readily applicable tool for risk identification that can be integrated into routine care across hospital, outpatient, and primary care settings empowering not only health professionals and caregivers, but patients themselves in the pursuit of safe and dignified aging.

Whenever intrinsic risk factors are identified in a patient, corresponding action must be taken to reduce or eliminate modifiable extrinsic risk factors, aiming to mitigate the cumulative impact of structural and physiological skin changes inherent to aging. The combination of intrinsic vulnerability and unfavorable environmental or care-related conditions significantly amplifies the likelihood of skin tear occurrence. Therefore, a proactive and systematic approach to risk identification is indispensable.

This checklist is designed to be simple, objective, and readily applicable across diverse care settings including hospital wards, outpatient clinics, and primary care requiring no specialized equipment and minimal time to complete. We believe that equipping health professionals, caregivers, and patients with accessible tools to recognize and address friction injury risk is essential to closing existing knowledge gaps and improving the quality and safety of care delivered to the elderly population.

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