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MAIN NURSING DIAGNOSES IN THE CARE OF PATIENTS WITH DIABETIC FOOT IN PRIMARY HEALTH CARE

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Ana Fagundes Carneiro[1], Ane Raquel de Oliveira[2], Layse da Silva Vieira[3], Dayane da Cunha Prevost[4], Márcia Cristina dos Santos[5], Milena Maria da Silva Acioli[6], Gabriel Nivaldo Brito Constantino[7] and Wanderson Alves Ribeiro[8]

ABSTRACT

Introduction: Diabetic foot, a complication of diabetes mellitus, results from the interaction between peripheral neuropathy and peripheral vascular disease. Neuropathy compromises the sensitivity of the lower limbs, increasing the risk of injury. Vascular disease reduces blood flow, making it difficult to heal and increasing complications. A multidisciplinary approach, with emphasis on nursing care guided by the Systematization of Nursing Care, aims to prevent complications and improve the quality of life of patients. Objective: to characterize the scientific evidence about the main diagnoses related to the care of patients with diabetic foot in primary health care. Method: This is an integrative review that explores the theoretical conceptions of approach, along with the techniques that contribute to the construction of reality and the creative potential of the researcher. Results: In the selected studies, no articles were published in 2019. In 2020, only 2 articles were published, representing 25% of the total that year. In 2021, 1 articles were selected, totaling 12.5% of

[1] Nursing Student at Iguaçu University (UNIG)
E-mail: anafagundes26@gmail.com
ORCID: https://orcid.org/0000-0002-3696-6996
[2] Nursing Student at Iguaçu University (UNIG)
E-mail: annebrastlly@gmail.com
ORCID: https://orcid.org/0000-0003-0242-1856
[3] Nursing Student at Iguaçu University (UNIG)
E-mail: laysesribeiro@gmail.com
ORCID: https://orcid.org/0000-0001-5948-1935
[4] Nursing Student at Iguaçu University (UNIG)
E-mail: 210025512@aluno.unig.edu.br
ORCID: https://orcid.org/0000-0002-2081-1842
[5] Nursing Student at Iguaçu University (UNIG)
Email: enfasantos2024@gmail.com
Orcid: https://orcid.org/0009-0008-1296-8576
[6] Nursing Student at Iguaçu University (UNIG)
E-mail: milenamacioli@gmail.com
ORCID: https://orcid.org/0000-0002-4558-8333
[7] Undergraduate nursing student at Iguaçu University (UNIG)
E-mail: gnbconstantino@gmail.com
ORCID: https://orcid.org/0000-0002-9129-1776
[8] Nurse
Master and Doctorate student in Health Care Sciences at the Academic Program in Health Care Sciences at the Fluminense Federal University
Postgraduate in Stomatherapy from the State University of Rio de Janeiro
Medical Student from Iguaçu University
E-mail: nursing_war@hotmail.com
ORCID: https://orcid.org/0000-0001-8655-3789

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the year's publications. In 2022, the number increased to 4, representing 50% of publications. In 2023, 1 articles were identified, equivalent to 12.5% of the total publications. Discussion: The analysis of nursing diagnoses in studies on diabetic foot reveals significant challenges for patients. Problems such as impaired mobility, insomnia, impaired skin integrity, and lack of understanding about diabetes are common. Nurses take patient-centered approaches, including nonpharmacologic therapies, guidance on proper footwear, personalized glycemic control, and promotion of lower limb health and mobility through exercise and active lifestyle. Conclusion: The lack of studies on diabetic foot nursing diagnoses compromises the provision of personalized care. It is crucial to address social and emotional aspects, invest in research and evidence-based interventions. Collaboration between academia, health professionals, and policymakers is essential to bridge this gap and ensure quality care for patients.

Keywords: Diabetic foot, Nurses, Nursing Diagnosis.

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INTRODUCTION

Diabetes, a chronic condition characterized by high blood glucose levels due to insufficient insulin production or resistance, demands an understanding of normal glucose values. Fasting, normal values usually range between 70 and 99 mg/dL (milligrams per deciliter), while glucose levels two hours after a meal are usually less than 140 mg/dL. Values between 100 mg/dL and 125 mg/dL may signal prediabetes, while results equal to or greater than 126 mg/dL in fasting, in two different tests, confirm the diagnosis of diabetes.[1]

The history of Diabetes Mellitus (DM) dates back thousands of years. In Antiquity, Greek and Roman records described symptoms such as increased thirst and urine production, characteristics associated with the disease. However, it was only in the nineteenth century that scientists began to better understand the condition. In 1889, researcher Joseph von Mering and physiologist Oskar Minkowski discovered that removing the pancreas from dogs resulted in symptoms similar to those of diabetes, suggesting a link between the pancreas and the disease.[2]

In the early twentieth century, the discovery of insulin by Frederick Banting and Charles Best in 1921 marked a revolutionary milestone in the treatment of diabetes. The ability to deliver exogenous insulin has enabled the control of blood sugar levels in patients with type 1 diabetes, saving countless lives. Since then, understanding the pathophysiology of diabetes, coupled with advances in medical technology and scientific knowledge, has led to significant improvements in the diagnosis, treatment, and management of the disease, transforming the lives of diabetes patients around the world.[3]

Characterized by a complex interaction of metabolic and hormonal changes, this pathophysiological condition directly impacts the regulation of blood glucose levels. In type 1 diabetes, an autoimmune response triggers the destruction of the beta cells of the pancreas, which are responsible for producing insulin. This process results in insufficient or no insulin production, leading to a chronic increase in blood glucose levels and triggering a series of systemic complications.[4]

In the pathophysiology of type 2 diabetes, insulin resistance emerges as a central feature. The body's cells gradually become less sensitive to the action of insulin, resulting in an imbalance in glucose metabolism. In addition, the pancreas often fails to compensate for this resistance by producing enough insulin to keep glucose within healthy limits. This complex process results in persistent hyperglycemia and ongoing challenges in regulating blood sugar levels.[5]

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The symptoms of diabetes are comprehensive and vary according to the type and severity of the condition. In addition to classic symptoms such as excessive thirst, frequent urination, fatigue, and blurred vision, patients may experience a wide range of signs and symptoms, including recurrent infections, slow wound healing, tingling in the extremities, unexplained weight loss, and constant hunger. These symptoms can be subtle or acute, and their presence often alerts to the need for medical evaluation and accurate diagnosis.[6]

Furthermore, the association between insulin resistance and obesity is well established, with visceral fat accumulation playing a crucial role. Visceral fat, which is deposited around the abdominal organs, promotes the release of pro-inflammatory substances and excess free fatty acids, triggering inflammatory processes and interfering with the insulin sensitivity of cells. This metabolic imbalance contributes to insulin resistance, increasing blood glucose levels and the risk of developing type 2 diabetes.[7]

The prevalence of diabetes mellitus in adults, especially in the age group of 65 years and older, is remarkably significant in Brazil, with diagnoses becoming more frequent from the age of 45 onwards. Recently, prevalence rates have reached 10%, representing a notable increase from previous measurements, which recorded 9.2% in 2021 and 5.5% in 2006. This condition significantly affects the elderly, with a rate of 30.4% in the age group over 65 years old, according to data from the capitals of Brazil.[8]

As for the types of diabetes, of the 16.8 million diabetics in the country, 10% are diagnosed with type 1 diabetes, while 90% have type 2 diabetes, largely acquired due to lifestyle habits. Surprisingly, more than 1.1 million Type 1 diabetics are children and adolescents under 20 years of age, revealing an alarming picture that demands specialized attention and health policies aimed at this vulnerable group.[9]

In addition to clinical aspects, diabetes is interconnected with socioeconomic and cultural factors that influence its manifestation and impact on people's lives. For example, dental malocclusions can be an additional challenge for those with diabetes, affecting vital functions such as chewing, diction, and swallowing. This impact is particularly relevant for children, who may face problems such as accelerated eruption of teeth, highlighting the complexity of the condition and its ramifications beyond the medical sphere.[8]

In the context of the target audience affected by diabetes, the pathological complications associated with this condition have a significant impact on quality of life and overall health. Specifically, for older adults, who make up a significant portion of diabetes cases, these complications may be even more concerning. The increased risk of

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cardiovascular disease poses a serious threat to already vulnerable cardiovascular health in this age group. Complications such as neuropathies can result in mobility problems and increase the risk of falls and injuries, directly impacting the independence and daily functionality of older adults with diabetes.[10]

Additionally, diabetes-related eye complications can have significant implications for vision, which is particularly crucial at older ages, where vision may already be compromised due to natural aging. The progression of nephropathic complications is also of particular concern, given the high prevalence of chronic kidney disease in older adults and the potential impact on quality of life and the need for more invasive medical interventions, such as dialysis.[11]

Diabetic foot, a serious complication of diabetes, arises from the complex interplay between peripheral neuropathy and peripheral vascular disease. Peripheral neuropathy compromises the nerves of the lower limbs, resulting in a reduction in sensitivity and inability to perceive foot injuries. As a result, simple wounds can progress to deep ulcers and serious infections without proper treatment. On the other hand, peripheral vascular disease compromises the blood supply to the feet, making it difficult to heal and increasing the risk of complications.[10]

The distinctive features of the diabetic foot include the persistent presence of chronic wounds, difficult-to-heal ulcers, foot deformities, calluses, changes in skin color, and loss of hair on the feet and legs. Additionally, neuropathy can cause unusual sensations, such as tingling, burning, or numbness in the feet, signaling the need for specialized attention.[12]

Imposing important impacts on the daily and social life of patients. The restrictions arising from the condition, such as the need for strict foot care and judicious choice of footwear, can limit daily activities and mobility. In addition, frequent medical consultations and treatments to prevent complications, such as ulcers and infections, require time and resources, interfering with routine and social interactions.[3]

This condition can restrict participation in social, recreational, and professional activities, contributing to the patient's isolation. The need to avoid foot injuries and constantly monitor foot health can create obstacles in interpersonal relationships, reducing the quality of social life. In addition, serious complications, such as amputations, negatively impact self-esteem and personal image, resulting in greater social seclusion.[12]

Nurses' care for patients with diabetic foot is guided by the Systematization of Nursing Care (NCS) and regulated by ordinances 272/2002 and 359/2009. Through the

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NCS, the nurse performs a detailed evaluation of the patient, including medical history, current foot conditions, presence of ulcers, and risk factors. Based on this assessment, accurate nursing diagnoses are established, identifying potential problems such as risk of ulcers and impaired sensitivity.[13]

In planning, the nurse sets personalized goals and interventions to prevent complications and promote the health of the patient's feet, involving foot care education and glycemic control. In implementation, the nurse executes the planned interventions, offering emotional support and closely monitoring the patient's response.[14]

During the assessment, the nurse reviews the care plan, checks the effectiveness of the interventions, and makes adjustments as needed. By strictly following the nursing process and integrating the guidelines of the ordinances, nurses play a crucial role in preventing complications in patients with diabetic foot. This model of individualized and comprehensive care aims to ensure the patient's progress and safety throughout the treatment, contributing to a better quality of life and reducing the risk of serious complications associated with the condition.[15]

Through home visits, nurses play a crucial role in promoting health and preventing complications. During these visits, the nurse can directly assess the patient's living environment, identify potential risk factors for foot injuries, and offer personalized guidance on podiatric care and wound prevention.[16]

Additionally, home care allows for a closer connection between nurse and patient, facilitating understanding of individual needs and promoting a patient-centered approach to care. Through this close contact, the nurse can offer emotional support, educate about healthy lifestyle habits, and provide information on diabetes management, thus contributing to the improvement of the patient's quality of life and the prevention of future complications.[17]

In view of the alarming increase in the incidence of diabetes and its consequent complications, it is essential to explore care strategies that address the specific needs of these patients in a comprehensive way. This implies considering not only the clinical aspects of the condition, but also the various social, emotional, and environmental factors that exert a significant influence on their health and quality of life.[18]

In this complex circumstance, Orem's theory emerges as a valuable conceptual framework to guide nursing practice. By focusing on the concept of self-care and the promotion of patient independence, this theory offers a holistic and individual-centered

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approach. Through the application of the principles of Orem's theory, nurses have the ability to empower diabetic foot patients to take care of themselves more effectively. This not only promotes self-sufficiency and adaptation, but also contributes to improved health outcomes, especially when care is extended to patients' home environment.[19]

Based on the above, the article aims to characterize the scientific evidence about themain diagnoses related to the care of patients with diabetic foot in primary health care.

METHODOLOGY

It is an integrative review research, it includes the theoretical conceptions of approach, the set of techniques that enable the construction of reality and the divine breath of the researcher's creative potential.[20]

It is worth mentioning that an integrative review is a specific method, which summarizes the past of the empirical or theoretical literature, to provide a more comprehensive understanding of a particular phenomenon.[21] This research method aims to trace an analysis of the knowledge already built in previous research on a given topic. The integrative review enables the synthesis of several studies already published, allowing the generation of new knowledge, based on the results presented by previous research.[22-23]The procedure used for literature literature review is based on six stages, according to Mendes, Silveira and Galvão22, which are: Identification of the theme and selection of the research question; Establishment of inclusion and exclusion criteria and selection of publications; Definition of the information extracted from the reviewed publications; Categorization of the data obtained; Evaluation of the selected studies; Interpretation and presentation/synthesis of research results.

The search was then carried out through the following databases: Medical Literature Analysis (MEDLINE) via PubMed, Latin American and Caribbean Center on Health Sciences Information (BIREME), and Latin American and Caribbean Literature on Health Sciences (LILACS), Virtual Health (VHL), Brazil Scientific Electronic Library Online (SciELO) and Google School. A total of 47 relevant articles were found, and only 19 of them were selected for the construction of this work.

The inclusion criteria for the selection of articles were full scientific studies, in language, with a time frame from 2019 to 2023, with free and open access. Exclusion criteria were excluded from publications not related to the theme, repeated articles or only with abstracts, dissertations and theses. The evaluation of the studies in terms of the level

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of evidence (NE) followed the proposal of Melnyk and Fineout-Overholt[24] as presented in Chart 1.

Chart 1 – Classification of levels of evidence – Rio de Janeiro, Brazil. 2024.

Level	Study Type
I	Evidence related to systematic review or meta-analysis of randomized controlled trials or from clinical guidelines based on systematic reviews of randomized controlled trials;
II	Evidence from at least one well-designed randomized controlled trial;
III	Evidence from well-designed clinical trials without randomization;
IV	Evidence from well-designed cohort and case-control studies;
V	Evidence from a systematic review of descriptive and qualitative studies;
SAW	Evidence derived from a single descriptive or qualitative study;
VII	Evidence derived from opinion of authorities and/or report of expert committees

Fonte: MELNYK; FINEOUT-OVERHOLT.[24]

The following descriptors were chosen: Nursing Diagnosis; Nursing Process; Systematization of Nursing Care; It is also worth mentioning that, as this is a bibliographic study of the integrative review type and does not involve human beings, the opinion of the Research Ethics Committee was waived.

Based on the inclusion and exclusion criteria, searches for evidence were carried out in the following electronic databases mentioned above, using the PICO strategy, which represents an acronym for Patient/problem, Intervention, Comparison and "Outcomes" (outcome). The vocabularies of controlled descriptors were the Health Sciences Descriptors (DeCS), used in the Virtual Health Library (VHL), inserted in the database, using the PICO strategy, as shown in Chart 2.

Chart 2 – Search for evidence in databases using the PICOT strategy - Rio de Janeiro, Brazil. 2024.

Acronym	Definition	DeCS
P	Patient or Population	Diabetic foot
I	Intervention	Nursing Process
C	Control or comparison	Systematization of Nursing Care
Or	Outcomes/Clinical Outcome	Nursing diagnoses

Source: Authors' construction (2024).

In view of the above, in the present study, the following question was formulated to guide the searches of the studies: What is the scientific evidence about themain diagnoses related to people with diabetic foot?

All titles and abstracts of papers identified in the databases, using the descriptors and evaluated as eligible were separated and analyzed in full. The details of the selection of studies for the integrative review are represented in Flowchart 1, prepared in accordance with the guidelines of PRISMA.[25]

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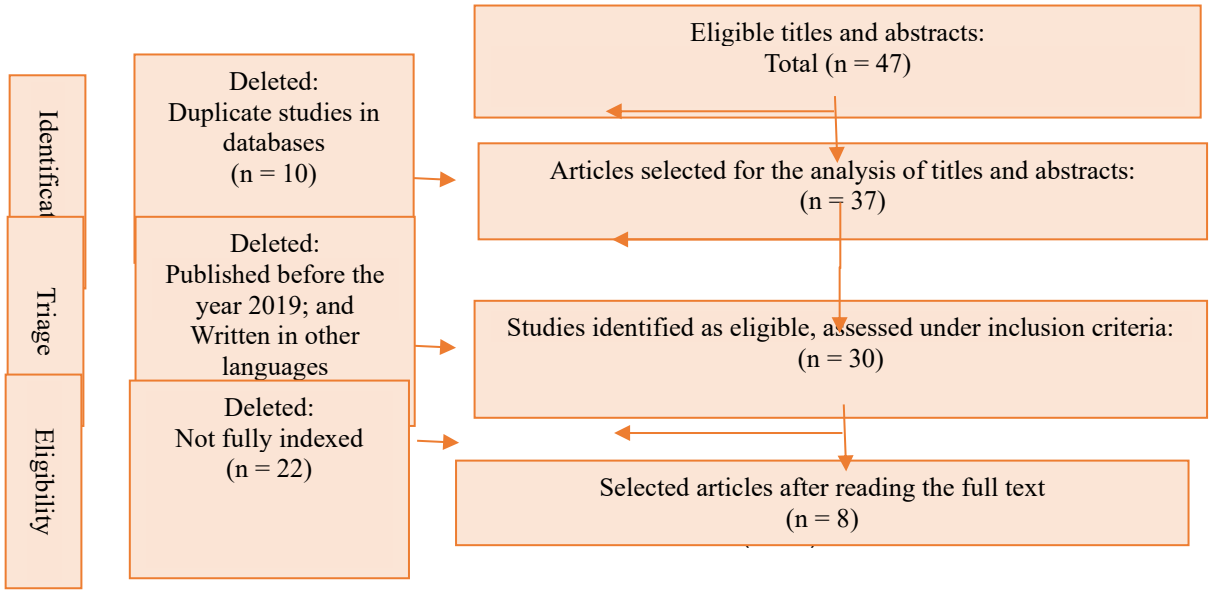
Flowchart 1 – Studies selected and excluded for literature review - Rio de Janeiro, Brazil. 2024.



It is observed in Flowchart 1 that 47 abstracts were found in the databases using the chosen descriptors. Of these, 10 were repeated and, therefore, according to the selection criteria, were excluded. When the exclusion criteria were applied in relation to the publication date prior to 2019, of the remaining 30 studies, 22 were excluded, and 8 articles were finally selected for the integrative review.

RESULTS

We selected 8 articles on nursing diagnoses that contemplate the care of people with diabetic foot.

In the selected studies, no articles were published in 2019. In 2020, only **2** articles were published, representing 25% of the total that year. In 2021, **1** articles were selected , totaling 12.5% of the year's publications. In 2022, the number increased to **4**, representing 50% of publications. In 2023, **1 articles were identified, equivalent to 12.5% of the total publications.**

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Chart 3 – Distribution of the articles selected in the databases according to the variables researched - Rio de Janeiro, Brazil. 2024.

Title/Author	Periodical/Year	Objective	Methodology/Level of Evidence	Main results
Nursing diagnoses and interventions in patients with chronic wound in primary and secondary care/ Bezerra et al.	Braz. J. Enterostomal Ther/2023	To identify the nursing diagnoses and interventions related to patients with chronic wound produced by a specific system in primary and secondary care.	This is a descriptive and quantitative study.	The main nursing diagnoses and interventions dealt with integumentary and emotional aspects and risks such as falls and infection.
Nursing diagnoses and interventions for patients with diabetic foot: a systematic review of the literature/ Teixeira et al.	VI Brazilian Symposium on Stomatherapy North-Northeast/2022	Identify nursing diagnoses according to taxonomy NANDA and correlate them with the nursing interventions evidenced in patients with diabetic foot.	This is a systematic review of the literature.	In the second stage, nursing findings were identified, such as ineffective control of the therapeutic regimen, self-care deficit, deficient knowledge, impaired skin integrity, risk of infection, ineffective peripheral tissue perfusion, and impaired physical mobility.
Application of the nursing process to the individual with diabetes/	Brazilian Journal of Health Review/2022	The objective of this study was to apply the implemented nursing process in the light of the Theory of Adaptation of Callista Roy to a patient diagnosed with diabetes mellitus.	This is a case study.	The need for greater commitment from family members through the therapeutic plan proposed to the patient is highlighted.
Nursing process in a patient with diabetic foot: Experience report/ Brandão	Rev. Rede cuid. Health/2020	The objective of this study was to describe the experience of applying the Nursing Process to a patient with diabetes, diabetic foot sufferer.	This is a descriptive and qualitative study.	The care of complex wounds such as diabetic foot requires innovative strategies in Family Health Centers, close to the population.
Nursing diagnoses in patients with type 1 Diabetes Mellitus/ Magalhães et al	HRJ/2022	To identify the main Nursing Diagnoses according to the NANDA-I taxonomy in adults with DM1.	This is a multiple case study.	Essential nursing care for patients with T1D, including guidance on insulin therapy and skin care to prevent complications.
Ineffective peripheral tissue perfusion in patients with diabetic foot: a	Rev Bras Enferm/2021	To develop a mid-range theory for the diagnosis of ineffective peripheral tissue	This is an integrative review of the literature.	Medium-range theory improved nursing practice by addressing ineffective peripheral tissue

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medium-range theory/ da Silva et al		perfusion nursing in patients with diabetic foot.		perfusion, filling gaps in knowledge.
Nursing diagnoses in diabetic patients: an integrative review/ Serra et al	Rev enferm UERJ/2020	To identify nursing diagnoses according to the NANDA International, Inc. taxonomy evidenced in patients with diabetes mellitus.	This is an integrative review of the literature.	The predominant domains were: Health Promotion, Nutrition, Elimination and Exchange, Activity/rest, Coping/Stress Tolerance, and Safety/protection.
Nursing diagnosis in elderly people with diabetes mellitus according to Orem's Self-Care Theory/ Marques et al	Rev Bras Enferm/2022	To identify the nursing diagnoses and self-care conditioning factors in elderly people with diabetes mellitus, in the light of Orem's Self-Care Theory.	This is an exploratory, descriptive study with a qualitative approach.	The development of the disease and the consequences of chronic hyperglycemia were little recognized by the elderly, interfering with low adherence to self-care practices and disease control.

Source: Authors' construction (2024).

Chart 4 – Nursing Diagnoses and Interventions identified from the selected studies - Rio de Janeiro, Brazil. 2024.

Nursing Diagnoses	Nursing Interventions	Expected Results
Impaired physical mobility	• Strategies to manage pain associated with diabetic foot; • Guidance on the use of shoes that protect the feet and do not cause pressure points; • Control of blood glucose levels to prevent diabetic foot complications.	➢ The maintenance or improvement of mobility and prevention of major complications.
Impaired skin integrity	• Cut fingernails of normal thickness when soft, using a nail clipper and using the curve of the finger as a guide; • Examine the skin for irritation, cracks, lesions, bunions, calluses, deformities or edema; • Carefully drying between your fingers	➢ Injury prevention
Insomnia	• Explain the importance of adequate sleep for overall health and recovery; • Assess the patient's sleep pattern, including duration, quality, and difficulties;	➢ Improved sleep quality; ➢ Reduced difficulty falling asleep and nighttime awakenings.
Sedentary lifestyle	• Explain the importance of an active lifestyle and the risks associated with a sedentary lifestyle; • Help the patient create an exercise plan tailored to their needs and limitations.	➢ Improved blood circulation in the lower limbs; ➢ Prevention of complications related to diabetic foot.
Knowledge deficit	• Provide clear information about the diabetic foot, its complications, and the importance of self-care. • Teach foot care techniques such as hygiene, nail trimming, and proper footwear choice.	➢ Increased knowledge about diabetic foot and its complications. ➢ Improved adherence to treatment and prevention of complications.
Risk of infection	• Check the integrity of the skin of the feet and evaluate any changes;	➢ Absence of signs of foot infection

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	• Measuring blood glucose levels regularly to manage diabetes; • Monitor vital signs and indicators of systemic infection.	
Unbalanced nutrition: less than the body's needs	• Explain the importance of proper nutrition.	➢ Change in dietary pattern;
Ineffective self-control of the health	• Explain that lifestyle changes and learning will take time to integrate.	➢ Better understanding of the disease and the relevance of self-care.
Health behavior inclined to risk	• Explain and discuss about the disease, treatment regimen, and necessary lifestyle changes.	➢ Adopt lifestyle changes that support individual health care goals.
Verbal communication Impaired	• Explain and discuss the disease	➢ Understanding of health status.
Impaired social interaction	• Discuss feelings; • Instigate friendships	➢ Improvement of the social and family context.
Risk of unstable blood glucose	• Explain the importance of preventing glycemic variations; • Provide guidance on the need to regularly monitor blood glucose levels; • Teach glycemic self-monitoring techniques.	➢ Maintenance of glycemic levels within the target range.
Provision for control Improved health	• Explain to the patient the importance of self-monitoring in an attempt to change behavior; • Assist the patient in devising a systematic plan to change behaviors.	➢ Personal actions to control diabetes mellitus, its treatment and prevention of the evolution of the disease.
Sharp pain	• Perform a thorough pain assessment, including its location, intensity, and characteristics; • Use pain scales to quantify the patient's discomfort.	➢ Acute pain relief; ➢ Improvement in the patient's quality of life.
Anxiety	• Teach deep breathing, meditation or muscle relaxation techniques; • Encourage the patient to practice these techniques regularly.	➢ Reduction of anxiety.
Risk of falling	• Evaluate the patient for risk factors for falls, such as muscle weakness, peripheral neuropathy, and gait changes; • Identify environmental conditions that may increase the risk of falls, such as slippery floors or obstacles.	➢ Prevention of falls and related injuries.
Damaged self-esteem	• Assess the patient's level of self-esteem, considering factors such as self-image, acceptance of the diagnosis, and adaptation to lifestyle changes; • Identify negative or distorted beliefs about oneself related to diabetic foot	➢ Improvement in self-esteem and self-acceptance. ➢ Increased patient confidence in dealing with diabetic foot.
Self-care deficit	• Educate the patient about the importance of self-care for the prevention of complications in the diabetic foot; • Provide guidance on appropriate techniques for each activity, such as choosing appropriate footwear and foot hygiene.	➢ Improvement in the patient's ability to perform self-care activities. ➢ Prevention of complications related to diabetic foot.
Compromised self-image	• Offer clear information about diabetic foot, its complications and prevention strategies;	➢ Improvement in self-image and body acceptance;

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	• Listen carefully to the patient's concerns and provide a supportive environment.	➢ Increased patient confidence in coping with physical changes.
Ineffective control of the therapeutic regimen	• Determine the patient's own recognition of the problem; • To help the patient identify realistic and achievable goals; • Helping to adhere to the therapeutic regimen to daily living	➢ Reach of the imparted understanding of diabetes, its treatment and the prevention of complications.
Risk of injury	• Evaluate the specific risk factors for diabetic foot injuries, such as neuropathy, poor blood circulation, and foot deformities; • Identify areas of greater vulnerability, such as calluses, ulcers, or wounds.	➢ Prevention of foot injuries; ➢ Improved skin integrity and reduced risk of complications.
Risk of peripheral neurovascular dysfunction	• Assess neurovascular function of the lower limbs, including sensitivity, reflexes, arterial pulse, and skin temperature; • Identify specific risk factors, such as diabetic neuropathy and poor blood circulation.	➢ Prevention of complications related to peripheral neurovascular dysfunction; ➢ Improved blood circulation and sensitivity of the lower limbs.
Impaired sleep pattern	• Assess the patient's sleep pattern, including duration, quality, and difficulties; • Record sleep start and end times, as well as any nighttime awakenings	➢ Improved sleep quality.
Fatigue	• Assess the patient's level of fatigue, considering the intensity and duration; • Teach relaxation techniques such as deep breathing and meditation.	➢ Improvement in quality of life; ➢ Reduced fatigue and increased functional capacity.

Source: Authors' construction (2024).

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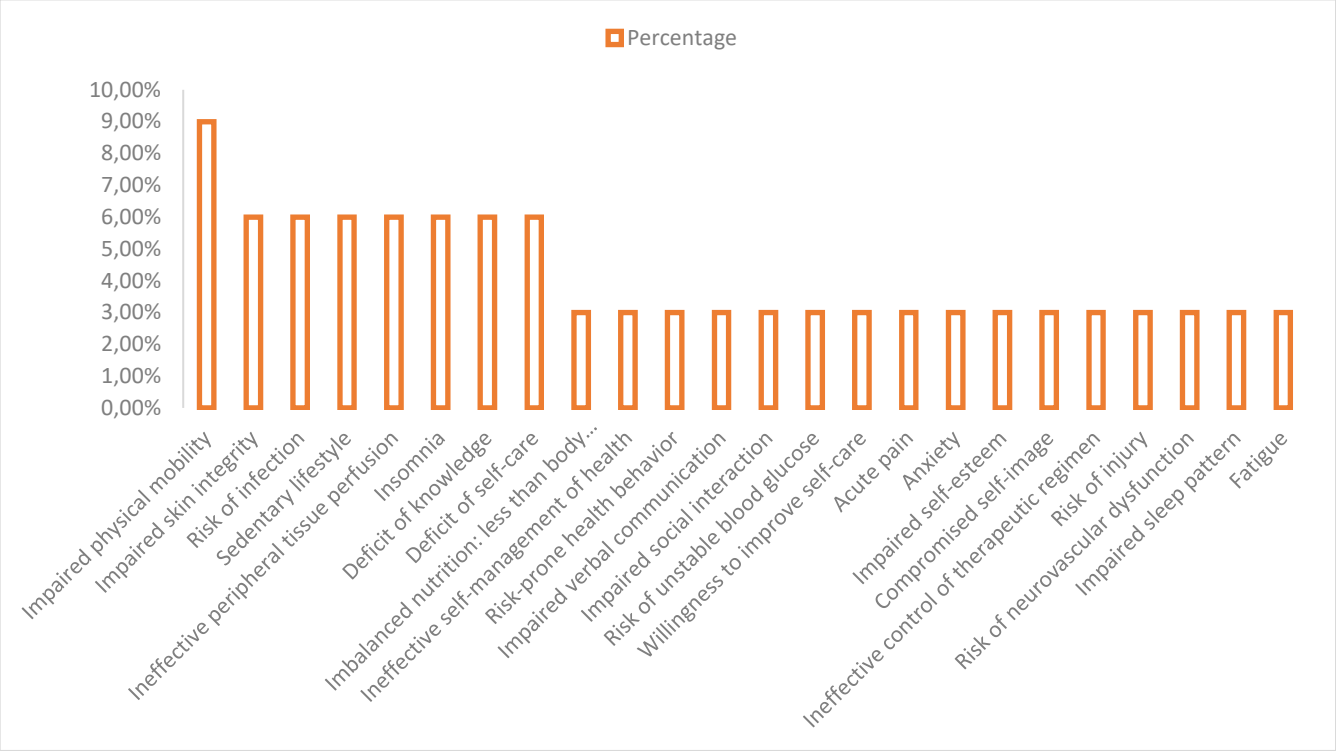
Chart 5 - Distribution of nursing diagnoses through a graph - Rio de Janeiro, Brazil. 2024



Source: Authors' construction (2024).

DISCUSSION

The detailed analysis of the nursing diagnoses present in studies on diabetic foot reveals not only the inherent complexity of the condition, but also the various impacts it has on the lives of patients. By understanding these diagnoses more deeply, it is possible to glimpse the extent of the challenges faced by those living with diabetic foot and how nursing professionals can intervene effectively to improve their quality of life.[26]

One of the most common problems is impaired physical mobility, affecting 9% of cases. This limitation not only impairs the patient's ability to move and perform daily activities, but also represents a significant risk factor for additional complications such as ulcers and amputations. Loss of mobility can have a profound impact on the patient's autonomy and independence, affecting their self-esteem and overall quality of life.[27]

Insomnia, a condition experienced by approximately 6% of patients, is often underestimated, although its implications are profound and far-reaching for physical and mental health. Lack of adequate sleep compromises not only the ability to perform during the day but also interferes with various facets of daily life. The effects range from the ability to concentrate and memory to emotional regulation, and can lead to increased stress and anxiety.[28]

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Another common and extremely important problem is the integrity of the compromised skin, affecting about 6% of patients with diabetic foot. Skin ulcers and wounds are more than just sources of pain and discomfort; They also constitute a route of entry for infections and serious complications. The presence of ulcers and wounds exponentially increases the risk of bacterial, fungal, and viral infections, which can lead to even more serious complications, such as osteomyelitis (bone infection) and sepsis (generalized infection).[29]

The lack of adequate understanding of diabetes, evidenced in 6% of cases, plays a critical role in the context of diabetic foot, increasing its incidence and severity. When patients do not have access to sufficient information about their condition, they face difficulties in identifying symptoms early and understanding the risk factors involved. This knowledge deficit can, in turn, accelerate the progression of complications such as ulcers and wounds, resulting in significant consequences for the quality of life of these individuals.[30]

For a complete approach, it is essential to consider not only the most common problems, but also those less frequent, such as anxiety and impaired self-esteem. Although they are not the primary diagnoses associated with diabetic foot, their presence has a significant impact on the patient's quality of life, affecting their social relationships and adherence to treatment. These psychosocial aspects play a crucial role in the overall well-being and effective management of the diabetic condition.[28]

Faced with the challenge posed by the diabetic foot, nurses adopt a patient-centered approach, recognizing the complexity and diverse needs inherent to the condition. To manage pain comprehensively, in addition to the administration of analgesics, practitioners employ a variety of non-pharmacological therapies, such as physical therapy, relaxation techniques, and the application of local heat or cold.[31]

In addition, nurses play a key role in offering detailed guidance on the use of appropriate footwear. These guidelines not only aim to provide comfort to the patient, but also aim to prevent the appearance of pressure points, wounds and ulcers on the feet, which are common complications associated with diabetic foot.[32]

When it comes to glycemic control, nurses adopt personalized approaches, considering the individual needs of each patient. This implies emphasizing the importance of adherence to the prescribed drug treatment, as well as performing regular blood glucose monitoring. These combined measures are intended not only to keep glucose levels in

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check, but also to promote overall health and prevent complications associated with diabetes.[27]

In addition, nursing professionals promote mobility and lower limb health by prescribing specific exercises, adapted to the individual capacities and limitations of each patient. These exercise programs aim not only to prevent complications related to diabetic foot, but also to improve blood circulation and flexibility of the lower limbs.[28]

At the same time, nurses offer support and guidance for adopting an active lifestyle, encouraging patients to incorporate healthy habits and physical activity into their daily routine. This holistic approach seeks not only to improve physical health but also to promote the emotional and psychological well-being of patients, helping them achieve a better quality of life.[33]

CONCLUSION

In view of the above, it is imperative to recognize the gap in studies of nursing diagnoses related to diabetic foot. Detailed analysis of these diagnoses is essential for a comprehensive understanding of patients' needs and for guiding effective nursing interventions. The lack of research in this area limits our ability to deliver individualized, patient-centered care, thereby compromising the quality of life and health outcomes of individuals affected by diabetic foot.

In addition, it is crucial to highlight the importance of addressing not only the clinical aspects but also the social, emotional, and environmental factors that influence the health and well-being of diabetic foot patients. A holistic and multidisciplinary approach is essential to ensure comprehensive and effective care, which takes into account all dimensions of the condition and the specific needs of each patient.

In this context, there is a need to invest in research and development of evidence-based nursing interventions for diabetic foot. Studies that explore the most common as well as less frequent nursing diagnoses are essential to enhance our understanding of the condition and improve patient health outcomes.

Therefore, it is critical that the academic community, healthcare professionals, and policymakers come together to bridge this knowledge gap and promote a more comprehensive and effective approach to diabetic foot care. Only through the advancement of research and evidence-based practice can we ensure that patients receive the quality

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care they deserve and that they can live with dignity and well-being despite the challenges posed by the diabetic foot condition.

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