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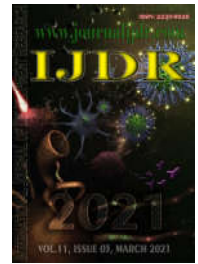
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REVIEW ARTICLE

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MEANING OF LIFE FOR PEOPLE WITH DIABETIC FOOT ULCERS: INTEGRATIVE REVIEW

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ABSTRACT

Introduction: Diabetes Mellitus causes several complications, among which is the diabetic foot, known as the presence of infection, ulceration and / or destruction of soft tissues. This condition is a source of suffering, causing depression and anxiety. **Objective:** To identify in the literature the meaning of the life of the person with diabetic foot ulcers, based on the philosophical theoretical framework of the Existential Analysis of Viktor Emil Frankl. **Methodology:** This is an integrative literature review, with searches performed at electronic databases: Virtual Health Library, Scientific Electronic Library Online and SciVerse Scopus, using the descriptors diabetic foot, existentialism, nursing and life-changing events. **Results:** The sample included 12 articles, emerging three categories: 1) Diabetes and diabetic foot. 2) The importance of understanding the experiences of people who have diabetic foot. 3) Relevance of meaning of life for people with diabetic foot. **Conclusion:** Logotherapy concerning Nursing knowledge has been used by nurses in their work considering the care of people in the finitude of life, critical patients, and their relatives/caregivers, as well as people undergoing cancer treatment, however there are no studies of the Meaning of life related to diabetic foot.

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INTRODUCTION

Diabetic foot ulcer (DFU) is a serious complication of Diabetes mellitus (DM) that brings several complications, including amputation of the lower limbs. It is considered a public health problem due to its morbidity and mortality, with high costs for the Unified Health System (UHS) due to prolonged hospitalizations and decreased quality of life. Considering the importance of comprehensive, holistic and humanized care, patients need to be understood as people, with their particularities when expressing their experience before the ulcer, which can facilitate their healing process and increase their quality of life. The DFU, if not adequately cared for, can generate various complications such as infections, ulcerations and/or destruction of soft tissues associated with neurological alterations that can cause amputations (Pedrosa e Andrade, 2019), generating psychological suffering for those who experience the disease.

Studies indicate that the impact of diabetic foot and its complications interfere in people's quality of life, since the main complaints are: paresthesia, constant pain, edema in the lower limbs, and in people living with DFU, presence of exudate, difficulty in the healing process and even amputations (Brasil, 2016). In this context of psychological complications and sufferings, patients with DFU generate high financial costs to the Unified Health System (UHS). These expenses are around 586.1 million BRL, and most of the costs (85%) are focused on the assistance of the ulcerated neuroischemic foot, about 500 million (Brazilian Society Of Diabetes, 2019). In addition to the costs, we can observe the disorganization of the system, the unawareness of health professionals regarding care, whether physical in the treatment of injuries, but mainly psychological or spiritual (Felix et al., 2020). Considering the need for holistic care to patients with DFU, the subjectivity of care is often absorbed by the massification of the rules and lack of time in care, requiring improving the care for these

people (Ercole *et al.*, 2014). Thus, it is important that they are understood as people, with their particularities when expressing their experience before the ulcer, in the light of Viktor Emil Frankl's existential analysis reference, which allows grasping the experience of what is "being-as-the-other" (Moreira e Sales, 2010). Existential Analysis investigates the accomplishment of the human being by the meaning of life and explains human existence. For Frankl, the word *Logos* refers to meaning and sense, and existence has three meanings: the way of being, the meaning of existence and the desire to find concrete meaning in life (Xausa, 1986). Given the considerations about the physical involvement of the foot as well as in the lives of people with diabetes, the guiding question was: What is the meaning of life for people who experience diabetic foot ulcers according to the national and international scientific literature?

METHODS

This is an integrative literature review, which proposed to point out the gaps of scientific knowledge, giving guidance to researchers about themes that need exploration (Mendes *et al.*, 2008). To perform this study, the following steps were covered: choosing the theme and defining the research question; definition of criteria for inclusion and exclusion of studies/sample or search in the literature; delimitation of the information to be extracted from the included studies and categorization; evaluation of selected studies; interpretation of the results; and presentation of the synthesis of knowledge (Ercole *et al.*, 2014). In the first stage, the PICO (Acronym for Patient, Intervention, Control or Comparison and Outcome) strategy was used, which directs the construction of the research guiding question, according to Chart 1. In this sense, the study was guided by the following research question: What is the meaning of life for people who experience diabetic foot ulcers?

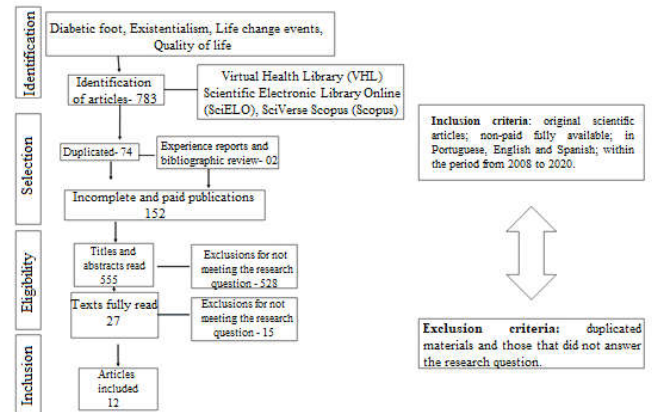
Chart 1. Application of the pico strategy, Salvador, Bahia, Brazil, 2021

ACRONYM	DEFINITION	APPLICATION
P	Patient	Person
I	Intervention	Diabetic foot
C	Control/Comparison	Not applicable
O	Outcome	Meaning of Life

Diabetic foot and life change events and quality of life

The scientific articles were selected from the databases Virtual Health Library (VHL) and Capes Journals, SciVerse Scopus (Scopus), in addition to the Scientific Electronic Library Online (SciELO). The search for the terms for research was carried out with the Health Sciences Descriptors (DeCS) and Medical Subject Heading (MeSH). Next, the following search strategies were defined: "Pé diabético, diabetic foot" AND "Existencialismo, Existentialism", "Pé diabético, diabetic foot" AND "Acontecimentos que mudam a vida, Life change events" and "Pé diabético, diabetic foot" AND *Qualidade de vida*, quality of life, using the Boolean operator "AND" between the expressions, since this allows delimiting the search, enabling the intercession between the descriptors. To define the sample, the following inclusion criteria were established: original scientific articles; fully available free of charge; in Portuguese, English and Spanish; articles from 2008 to 2020. Thus, duplicate scientific materials that did not answer the research question and did not meet the established period were excluded. The search returned 783 publications,

excluding 74 by duplication, 152 articles paid and not fully available. Initially, a floating reading of the titles and abstracts of the publications found with 555 articles read was performed, excluding 528 publications for not meeting the research question. Twenty-seven articles were fully read and 15 were eliminated because they did not answer the research question. The sample included 12 articles that contemplated the guiding question, according to flowchart 01.



Flowchart 1- PRISMA

The evaluation of the selected articles was performed from the full reading, with detailed and critical analysis, with a view to extracting understandings of the meaning of life for the person with diabetic foot ulcers as well as their repercussions. Logotherapy (a sense-centered psychotherapy) was chosen as a theoretical-philosophical framework, described by Viktor Emil Frankl (Lima, 2005; Frankl, 2011). This framework conceives human as a free, responsible being, aware of the own responsibilities, seeking a meaning for the life and with an unconscious God within oneself, revealing that the human being has the capacity to endure the most intense suffering, once he/she finds a meaning for his/her life (Frankl, 2011). It is a psychological school with phenomenological, existential and humanist character, also called Psychotherapy of the Meaning of life and the spiritual dimension of existence, known as the Third Viennese School in Psychotherapy (Gomes, 1987). After the analysis, there was the grouping in a synoptic chart, in addition to the presentation of the results in a descriptive way.

RESULTS

Chart 2 shows the characteristics of the selected articles, highlighting authorship, journal and year of publication. Regarding the type of journals, six were published in specific nursing journals and six were published in journals with a general health theme. Among the 12 articles selected, three were of foreign origin and available in English, and nine Brazilian articles, in Portuguese. All the articles analyzed had clear objectives, which provides better understanding during the reading and extraction of the data. When analyzing the research design of this selection, in the methodological aspect, six were qualitative and six quantitative. Chart 3 shows the characteristics of the articles related to title, population, objective and results, identifying diabetic people with neuropathic complications, with foot ulcers. In general, the selected articles aim to assess, understand the meaning of life as well as the quality of life for people with diabetic foot, which has repercussions in physical, social and psycho-emotional aspects.

Chart 2. References included in the integrative review according to title, author, journal and year, 2019

	TITLE	AUTHORS	JOURNAL AND YEAR
01	Assessment of depressive symptoms in people with diabetes mellitus and foot ulcers	Geraldo Magela Salomé; Leila Blanes; Lydia Masako Ferreira	Revista do Colégio Brasileiro de Cirurgiões, 2011
02	Anxiety and Depression among adult patients with diabetic foot: Prevalence and associated factors	Ali Ahmad; Mousa Abuibara; Hashem Jaddou; Nidal A. Younes; Kamel Ajlouni	<u>Journal of American Podiatric Medical Association</u> , 2018
03	The nursing care towards individuals with diabetic foot: a phenomenological focus	Ricardo Castanho Moreira; Catarina Aparecida Sales	Journal of School of Nursing USP, 2010
04	Assessment of the quality of life of patients with diabetes mellitus and foot ulcers	Sérgio Aguinaldo de Almeida; Maiko Moura Silveira; Patrícia Ferreira do Espírito Santo; Rita de Cássia Pereira; Geraldo Magela Salomé	Brazilian Journal of Plastic Surgery, 2013
05	The authentic care to the individual with diabetic foot under the Heideggerian focus	Ricardo Castanho Moreira; Catarina Aparecida Sales	Science, Care and Health, 2009
06	Action research: self-care practices of people with diabetic foot	Luciana Catunda Gomes de Menezes; Nády dos Santos Moura; Luara Abreu Vieira; Ariane Alves Barros; Eline Saraiva Silveira Araújo; Maria Vilani Cavalcante Guedes	Journal of Nursing UFPE on line, 2017
07	The perception of the bearers of Diabetes Mellitus type 2 in relation to amputation	Lúcia Percília Pereira Lucas; Elizabeth Barichello; Fernanda Bonato Zuffi; Maria Helena Barbosa	Revista Eletrônica de Enfermagem, 2010
08	Coping style and depression influence diabetic foot healing: observational and mechanistic evidence	K Vedhara; J N V Miles; MA Wetherell; K Dawe; A Searle; D Tallon; N Cullum; A Day; C Dayan; N Drake; P Price; J Tarlton; J Weinman; R Campbell	Diabetologia, 2010
09	Risk factors for developing diabetic foot	Julia Estela Willrich Boell; Renata Mafra Ribeiro; Denise Maria Guerreiro Vieira da Silva	Revista Eletrônica de Enfermagem, 2014
10	Social representations of diabetic foot for people with type 2 diabetes mellitus	Maria Seloi Coelho; Denise Maria Guerreiro Vieira da Silva; Maria Itayra de Souza Padilha	Journal of School of Nursing USP, 2009
11	A mindful change in diabetic patient care with diabetic foot: a case report	Daisy Moreira Gomes, Eliza Maria Rezende Dazio, Camila Maria Silva Paraizo, Mariana Viotti Nogueira Brito, Jamila Souza Gonçalves, Silvana Maria Coelho Leite Fava	Revista de Enfermagem do Centro-Oeste Mineiro, 2018
12	The diabetic person beyond a foot ulcer: healing, recurrence, and depressive symptoms	Matteo Monami; Rosella Longo; Carla Maria Desideri; Giulio Masotti; Niccolò Marchionni; Edoardo Mannucci	<u>Journal of American Podiatric Medical Association</u> , 2008

Chart 3. Texts included in the selection according to references, population/ samples, 2020

	REFERENCE	TYPE OF STUDY	POPULATION/ SAMPLE
01	Salomé et al., 2009	Exploratory, descriptive, analytical and cross-sectional study with a quantitative approach	50 patients with diabetes mellitus and foot ulcer
02	Ahmad et al., 2018	Quantitative approach	260 patients with diabetic foot at the Diabetic Foot Clinic.
03	Moreira e Sales, 2010	Phenomenological study with a qualitative approach	08 people who had any foot complications due to diabetes mellitus
04	Almeida et al., 2013	Analytical, cross-sectional, controlled and comparative study	50 people for the control group, with DM without ulcerated foot, and 50 for the study group, composed of diabetic patients with ulcerated foot.
05	Moreira e Sales, 2009	Study of existential phenomenology, with a qualitative approach	08 people who experience foot complications
06	Menezes et al., 2009	Qualitative study, action research	40 patients from a Primary Health Care unit who had diabetic foot
07	Lucas et al., 2010	Descriptive study with qualitative and hermeneutic approach	Seven subjects who underwent foot amputation due to Diabetes mellitus
08	Vedhara et al., 2010	Prospective, observational study	93 patients with neuropathic or neuro-ischemic diabetic foot ulcers
09	Boell et al., 2014	Cross-sectional study with a quantitative approach	70 people with diabetes mellitus
10	Coelho et al., 2014	Qualitative approach study	Ten people with diabetes mellitus
11	Gomes et al., 2018	Experience report	A 63-year-old man, with diabetic foot, chronic injury for 15 years and difficulties in living with illness.
12	Monami et al., 2008	Observational study with a quantitative approach	80 elderly, diabetic patients with foot ulcers.

The publications are focused on Nursing and Health, being divided into patients with foot lesions caused by DM complications, with a variety of repercussions seen in the studies ranging from preventive aspects to actions in the treatment of patients with foot ulcers. The results showed that part of the studies related psychosocial factors, anxiety and depression to complications of diabetic foot. Others related experiences with foot complications to self-care of people with diabetic foot. The selected studies show that people with diabetic foot are unable to control blood glucose, and/or the development of ulcers, the feeling of guilt arises for not having the knowledge and/or not taking care of themselves. Coping style and depression are directly associated with a higher probability of diabetic foot ulcer not healing.

DISCUSSION

Diabetes Mellitus and the Diabetic foot

DM is a chronic pathology that occurs when the pancreas produces insulin insufficiently or when the body does not use it adequately (Santos *et al.*, 2007). The uncontrolled DM can cause, in the long term, dysfunction and failure of various organs, especially kidneys, eyes, nerves, heart and blood vessels. Epidemiological studies support the hypothesis of a direct and independent relationship between blood glucose levels and cardiovascular disease. DM complications can be classified as acute complications (hypoglycemia, ketoacidosis and hyperosmolar coma) and chronic complications, such as

Chart 4. Texts included in the selection according to the objective and results, 2020

	OBJECTIVE	RESULTS
01	To assess the intensity of depression symptoms in diabetic patients with foot ulcers.	Diabetic patients with ulcerated foot had varying degrees of depressive symptoms
02	To determine the prevalence rates of anxiety and depression and examine associated risk factors in patients with diabetic foot.	The anxiety and depression prevalences were 37.7% and 39.6%, respectively.
03	To understand their experiences by living a foot complication in their existence in the world.	They reveal the importance of offering holistic care to the Being living with this complication.
04	To assess the quality of life of diabetic people with ulcerated foot compared to diabetic people without ulcers.	Diabetic patients with ulcerated foot present changes in quality of life, reflecting in the physical, social and psychoemotional domains.
05	To expose the authentic care experienced by the person with diabetic foot in their daily lives.	Care must express a harmonious life, in which each being shares his/her thoughts and feelings in a process of reciprocity and in which speaking and listening arise as a way of caring for.
06	To know the self-care practices of people with diabetic foot	The purpose of the knowledge produced was not only to provide information and exchange experiences, but, above all, to sensitize patients about the risks of foot complications
07	To describe the perception of patients with type 2 diabetes mellitus in relation to their amputation and expectations for the future.	Post-amputation expectations were identified as dependence on daily activities; religious attachment and fear of reviving a new amputation. In addition to pointing to the importance of holistic care of human beings before changes and the needs for re-adapting to society
08	To evidence that the cure of diabetic foot ulcers is affected by psychosocial factors such as suffering	Coping style and depression are associated with a higher probability of diabetic foot ulcer not healing.
09	To identify risk factors for developing diabetic foot	Advanced age; time of diagnosis of DM; overweight/obesity; inadequate diet; physical inactivity; lack of specific foot care; and hypertension were identified as risk factors. The population presented one or more risk factors that favor the appearance of complications related to the feet.
10	To understand the social representations of diabetic foot for people with type 2 diabetes mellitus	The representations of alterations and threats make the subjects seek in care the hope of not developing the diabetic foot or controlling the situation. When it does not occur, the feeling of guilt arises for not having the knowledge and/or not taking care of oneself.
11	To report the experience of members of an extension project in longitudinal follow-up to the person with Diabetes Mellitus.	There was better control of glycemic levels, changes in relation to eating habits with significant weight loss, healing process of lesions, mastery and ability in insulin application and more cooperative.
12	To show a significant relationship between depressive symptoms and wound healing. To assess the role of depressive symptoms in the cure and recurrence of diabetic foot ulcers.	Depressive symptoms are associated with impaired healing and recurrence of ulcers in the elderly with type 2 diabetes.

retinopathy, nephropathy, and diabetic neuropathy (Brasil, 2016). Thus, DM is associated with increased mortality and the risks of developing micro and macrovascular complications, as well as neuropathies. Thus, when leading to a total decrease or loss of visual acuity, renal failure and amputations of limbs, DM is associated with heavy health expenses, in addition to substantial reduced work capacity and life expectancy (Fiocruz, 2015). Among the chronic complications of DM, diabetic neuropathy (DN) is the complication that comprises a set of clinical syndromes that affect the sensory, motor and autonomic peripheral nervous system. They affect 50% of people with DM aged over 60 years, and may be present before the detection of loss of protective sensitivity, resulting in greater vulnerability to trauma and greater risk of developing ulcer (Brasil, 2016). These complications include "diabetic foot". It is a series of heterogeneous conditions in the foot, where DN and PAD, sometimes complicated by infections, can cause foot ulcers and lower limbs amputation. These foot injuries usually occur after ten years or more of disease and precede 85% of amputations. They reach, above all, the elderly population with predominance in males. Diabetic foot is considered a major challenge to Global Public Health, as it is one of the most debilitating complications of DM, with severe personal, social and economic costs (Schmidt *et al.*, 2010; Ahmad *et al.*, 2018). Foot ulcers and amputation of extremities are the most severe and have the greatest socioeconomic impact. Foot ulcers have an annual incidence of 2%, with the person with diabetes having a 25% risk of developing foot ulcers throughout life (Amin e Doupis, 2016). The impact of the diabetic foot on the affected person may extend beyond ulceration. This is because the limitations that the disease and treatment impose on the patient tend to impair the activities of

daily living, since they commonly generate different degrees of disability. The stigma and fear associated with foot injuries and amputations can cause emotional damage and favor depressive conditions (Boulton *et al.*, 2008).

The importance of understanding the experience of people with diabetic foot: Authors describe that experiencing diabetes can represent a challenge for both the person and his/her family members, because the condition of being diabetic affects life as a whole, drastically altering daily life, requiring an experience of special behaviors, self-care (Salomé *et al.*, 2009). A study carried out brings the feet as a foundation, safety for the body and fundamental for locomotion, socially represented as an anchor of independence and autonomy. However, diabetic foot generates socioeconomic impacts, causing expenses with treatment, physical and social disabilities such as loss of job and productivity (Batista e Luz, 2012). People who have foot ulceration caused by diabetes are more prone to concerns about future events, which can generate anxiety and depression, including change in sleep pattern, impaired mobility, and interference in some aspects of life such as sexuality with the feeling of helplessness (Coelho *et al.*, 2009). People living with complex injuries and risk of limb amputation experience feelings of fear, sadness, uselessness and frustration (Boulton *et al.*, 2008).

Relevance of the Meaning of Life for people with diabetic foot: Feelings such as fear, displeasure and helplessness are common among people who have chronic injuries, remembering that, in a society where independence is valued, depending on others can generate fear and frustration. Fear is a feeling that is part of the human being's living process. The

fusion of feeling causes emotional disorganization, with a period of conflict, doubts and unexpected reactions (Al-Busaidi *et al.*, 2016). According to Frankl, the human has a characteristic that defines him/her, calling it facticity. According to it, he/she is condemned to a *being-so-and-unable-to-be-differently*, being subjected to an irrevocable fate (Salomé e Espósito, 2007). The author adds that the search for a meaning is what motivates the life of the human being. Being a personal and non-transferable search, finding it will satisfy one's own will of meaning (Xausa, 1986). The meaning of life is a place that one wishes to reach, of tranquility in difficult moments, where one rests, where peace is found. It provides security to live adversity (Frankl, 1990). Meaning can be found in three different ways: by doing or creating something, loving someone or in the situation of suffering where there is no hope and nothing can be done to modify it. The important thing is how the person faces each situation (Araújo *et al.*, 2015).

Frankl presents optimism, considering that faith and love cannot be imposed, and that one cannot force oneself to be optimistic before any situation. To transform the Tragic Triad into Tragic Optimism requires a reason and a meaning to live life (Amaro, 2013). The meaning of life will then emerge as a commitment we have with it, bringing the light that "the human being is able to endure the most intense sufferings, when one has a meaning for the own life, a task charging achievement, a mission that is non-transferable" and highlights that "life already has a meaning from the moment we are thrown into this world", being the life full of meaning under any condition and in all circumstances (Zaleski, 1996).

Final Thoughts

Regarding nursing knowledge, the selected samples were sufficient to collect information about what was proposed in this study, highlighting some knowledge gaps. Thus, it is necessary to carry out studies that intertwine the meaning of life from the perspective of Viktor Frankl and the person with the diabetic foot. Logotherapy concerning Nursing knowledge has been used by nurses in their work considering the care of people in the finiteness of life, critical patients, and their relatives/caregivers, as well as people undergoing cancer treatment; however, there are no studies of the Meaning of Life in relation to diabetic foot ulcer.

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