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NON-PHARMACOLOGICAL INTERVENTIONS FOR PAIN MANAGEMENT

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Abstract: Introduction: Non-pharmacological interventions are a resource for pain control in patients undergoing palliative care, being recommended as a complement to pharmacological therapy, and can be understood as very valuable adjuvant options. **Objective:** To describe non-pharmacological interventions for pain control in patients with illnesses eligible for palliative care. **Methods:** This is a narrative review regarding non-pharmacological interventions for pain management, in the palliative care scenario. The methodological basis used to construct the work was composed of bibliographic research selected from scientific literature, which had as databases the National Library of Medicine (Pubmed), Scientific Electronic Library Online (SCIELO), Latin American and Caribbean Literature in Health Sciences (LILACS), Google Scholar and Periódicos Capes. Articles published between 2019 and 2024 were included, covering data from scientific literature in English and Portuguese. The key words used in the research were: "non-pharmacological intervention" and "pain" and studies that addressed patients in palliative care were selected. **Results/Discussion:** The use of non-pharmacological interventions for pain control in palliative care is still poorly systematized and practiced in health care. In this review, it was possible to identify exploratory studies that address different tools in different clinical conditions eligible for palliative care, such as: acupuncture, ear acupressure, physical exercises (including in water), yoga, transcutaneous electrical nerve stimulation, application of heat and cold, distraction techniques, massage, stretching techniques, massage and joint mobilization, technologies such as robots, mobile applications and video games, gentle suction, positioning, glucose supply, suction synchronized with breathing and use of an intraoral device, sleep hygiene, therapy cognitive-behavioral, use of immersive and non-immersive virtual reality, health education, self-management strategies, maintaining a healthy weight, modifying footwear, use of walking aids, heart rate variability biofeedback, dancing, games and recreational activities, olfactory interventions, art-based interventions, hypnosis and mindfulness techniques, applied to different populations, from newborns, pediatrics, adolescents, adults and elderly people. These are strategies that can bring quality of life, relief from pain symptoms and can have a positive impact on the sometimes-difficult day-to-day management of these patients. **Conclusions:** There is an arsenal of possible non-pharmacological interventions to control the pain of patients in palliative care. Some strategies need to be better systematized, require specific training and must be adapted to the different demands of patients.

Keywords: Palliative Care, Non-Pharmacological Interventions, Pain.

INTRODUCTION

In Brazil, approximately 625 thousand people need palliative care, a health approach whose objective is to improve the quality of life of patients with serious, chronic or advanced illnesses. This care involves pain relief, control of symptoms such as nausea and shortness of breath, and emotional support for both patients and their families. The Ministry of Health recently launched the National Palliative Care Policy in the Unified Health System (BRAZIL, 2024). The initiative aims to establish 1,300 specialized teams across the country, ensuring full coverage of services. But it is worth highlighting that the field of oncological and non-oncological palliative care is under construction, the policy is being implemented and the field is being scaled at a national level and studied within the scope of the National Academy of Palliative Care[1]. This

1. National Academy of Palliative Care. Situational Analysis and Recommendations for structuring Palliative Care Programs in

discussion is still very recent, even among health professionals.

Within the scope of the Unified Health System (SUS), Brazil made progress with the drafting of Resolution, number 41 published in 2018 by the Tripartite Intermanager Commission, which establishes that palliative care must be part of the integrated continuous care offered within the scope of the Assistance Network to Health. This resolution materializes and gives institutionality to the historic struggle for the development of palliative care in Brazil. It also emphasizes the inclusion of content on palliative care in undergraduate and postgraduate health education, as well as the provision of continuing education for workers in the SUS (Unified Health System) and the dissemination of information in society (BRAZIL, 2018). But the challenges for the real implementation and dissemination of palliative care in Brazil are numerous.

In addition to the existing gap in teaching and research institutions to incorporate palliative care into the basic curriculum, in the development of research, in the training of health workers in the SUS (Unified Health System) and the shortage of qualified professionals in palliative care in the Care Network in Health, a distorted conception of palliative care is still strong in society and in health services, associating it only with patients in the end-of-life process. (TRITANY, 2021).

According to the report on global access to palliative care and pain relief published by The Lancet Commission, in Brazil, people with serious illnesses often live with uncontrolled pain and without receiving this type of assistance (KNAUL et al., 2018). In Brazil, the National Academy of Palliative Care (ANCP) divides the structuring of palliative care into three increasing levels of complexity. The 1st level is Palliative care approach, 2nd level is General and the 3rd level corresponds to Specialized palliative care team (ANCP, 2018). And non-pharmacological interventions are part of this scenario of searching for resources to control pain in patients undergoing palliative care, in order to alleviate pain, unnecessary suffering, bringing comfort and dignity to the patient and going beyond pharmacological therapy, which can be understood as very valuable adjuvant options.

Adequate pain management is an essential pillar of palliative care and can significantly improve the quality of life of patients who require this care. However, pain management in these patients can be complex and challenging due to the multifactorial nature of pain and patients' increased sensitivity to medications and their side effects (VIANA et al., 2023). Regarding chronic diseases with the presence of chronic pain that require palliative care, we have a series of morbidities that require primary care monitoring, mainly for pain relief. The importance of this specific perspective is highlighted, but still a multidisciplinary approach that distances itself from the possibility of taking good care of all these cases. Among pain relief strategies, non-pharmacological interventions can gain prominence if teams are equipped to do so. A generalist approach by several health professionals can be based on a comprehensive assessment of the patient and propose interventions appropriate to the clinical picture and life cycle to meet different objectives. It is important that professionals master the techniques and create bonds with people for better results based on realistic goals.

The work in palliative care is known to be multidisciplinary, ideally composed of a team that includes many health professionals, to deal with complex demands that cover several health domains. Historically, the number of professionals specializing in the area and interested parties in general has grown, but

Brazil; São Paulo: ANCP; 2018.

this increase in permanent education is still insufficient. The minimum specialized palliative care team includes a doctor, nurse and psychologist or social worker (BRAZIL, 2018).

Pain is a very common symptom in the palliative care scenario, especially in moderate and advanced stages of illness and is still poorly addressed in care practice. It is not uncommon for patients to suffer from chronic and persistent pain that cannot be alleviated, and the suffering resulting from this worsens people's quality of life, not to mention the total pain, which needs to be seen from an integral perspective, taking into consideration, other psychic components, spiritual and social. In an expanded scenario of pain management in these patients, it is valuable to identify which non-pharmacological strategies can be used, so it is interesting that professionals in the multidisciplinary team are aware of these tools, which are still under construction in our country.

The study proposes to identify the state of the art of research that investigated non-pharmacological interventions for pain management in patients with serious illnesses eligible for palliative care.

METHODOLOGY

This is a narrative review regarding non-pharmacological interventions for pain management, in the palliative care setting.

The methodological basis used to construct the work was composed of bibliographical research selected from the literature, which had as its database: *National Library of Medicine (Pubmed), Scientific Electronic Library Online (SCIELO), Latin American and Caribbean Literature in Health Sciences (LILACS), Google Scholar and Periódicos Capes.*

Initially, 118 articles published in the period between 2019 and 2024 were identified, covering data from scientific literature in English and Portuguese. The key words used in the research were: "non-pharmacological intervention" and "pain". Of these, those that addressed clinical conditions that were not eligible for palliative care, that only addressed pharmacological interventions or that were not open for free access were excluded. Thus, in the end, a total of 26 articles were included, which are described in the results of this work.

Studies outside the aforementioned publication period, articles due to duplication and those that address pharmacological interventions for pain control or research that did not involve patients in palliative care were excluded. Furthermore, no restrictions were made regarding the age range and sex of the groups studied.

In order to establish a prior organization among the selected articles, a first data collection was assigned that included the article title, year of publication, abstract and methodological characteristics, in accordance with all the exclusion criteria mentioned above. The guiding question that will be used throughout the construction of the search was "What is the recent evidence regarding non-pharmacological interventions in pain management in patients undergoing palliative care?".

RESULTS AND DISCUSSION

From the search carried out, scientific articles were selected that addressed non-pharmacological intervention tools for pain management, aimed at patients with morbidities eligible for palliative care, in different populations, from newborns, to pediatric populations, adolescents, adults and elderly people.

The main strategies highlighted were: acupuncture, ear acupressure, physical exercises (including in water), yoga, transcutaneous electrical nerve stimulation, application of heat and cold, distraction

techniques, massage, stretching techniques, massage and joint mobilization, technologies such as robots, mobile applications and video games, gentle suction, positioning, glucose supply, suction synchronized with breathing and use of an intraoral device, sleep hygiene, cognitive-behavioral therapy, use of immersive and non-immersive virtual reality, health education, strategies self-management, maintaining a healthy weight, modifying footwear and using walking aids, heart rate variability biofeedback, dancing, games and recreational activities, olfactory interventions, art-based interventions, hypnosis techniques and mindfulness.

For cancer treatment, despite advances, the impact of pharmacological use on patients' lives is notable, highlighting its adverse effects. For this reason, there are countless approaches, pathways and therapies with innovations and technologies already proposed that are growing rapidly. Chemotherapy-induced peripheral neuropathy, for example, is a common adversity in this treatment, causing pain, numbness and affecting quality of life. When analyzing this symptom, Papadopoulos et al. (2023) presented positive/significant results for the use of non-pharmacological interventions – including acupuncture, physical exercise and yoga – in reducing neuropathic pain. Despite this, the same authors did not find a statistically significant impact on patients' quality of life, which can be attributed to the variability in interventions, different methods of assessing quality of life and the small sample size in the studies analyzed.

The human body has physiological pathways for pain transmission and control, which inform the central nervous system about the pain state. In order to use these pathways as alternatives for pain management, transcutaneous electrical nerve stimulation (TENS) activates inhibitory mechanisms (peripheral afferent fibers) that reduce central excitability and increase the concentration of β-endorphin and methionine-enkephalin (endogenous opioids) in the cerebrospinal fluid, thus reducing hyperalgesia. In this sense, Vance et al. (2022) demonstrated that TENS is safe and effective for a variety of acute and chronic pain conditions, including neuropathic pain associated with cancer.

Kawi et al. (2024) analyzed auricular acupressure (APA) as a non-pharmacological intervention for pain self-management. In this study, the participants had chronic pain and experienced using APA (a technique based on ear acupuncture that uses non-medicated seeds applied to specific points in the ear) on themselves, to reduce their own pain. Patients received access to a smartphone application with training videos on the technique and through which they received motivational messages. A significant reduction in pain intensity was observed, leading to less medication use, better sleep and less anxiety.

Innovative non-pharmacological interventions demonstrate promising results in improving the quality of life of children and adolescents with cancer, as highlighted by López-Rodríguez et al. (2020). This systematic review reveals that technologies such as robots, virtual reality, mobile applications and video games offer therapeutic benefits in the treatment of pain, anxiety and depression in this population. Studies using robots describe that they provide entertainment and social interaction, which has led to significant improvements in patients' well-being. Although the review does not provide details on which specific measures were used to evaluate these improvements, the fact that they are significant suggests a positive impact of robots on mood, anxiety and possibly pain perception, contributing positively to children and adolescents undergoing cancer treatment in reduction of stress and anxiety due to this playful interaction, which acts as a distraction

from the demands of treatment, providing moments of relaxation and joy, acting as a social stimulus, promoting self-esteem and positivity, in communication between patients and medical staff, facilitating the expression of needs and feelings. Importantly, more research is needed to determine the full extent of the benefits of robots and how to effectively integrate them into oncology treatment plans.

Furthermore, Comparcini et al. (2023) complement these findings by suggesting the use of immersive and non-immersive virtual reality (VR) as having positive potential in interventions for managing pain and anxiety in children with hematological or solid cancer. Thirteen studies were included in the review, five on pain, three on anxiety and five on both. The findings indicate that immersive VR showed benefit in reducing pain, especially during painful vascular access, venipuncture, and chemotherapy procedures.

However, data on reducing anxiety is still limited. Furthermore, the results indicated that immersive VR was significantly more effective compared to standard care, and non-immersive VR also showed benefits, but to a lesser extent.

Ogez et al. (2020) used the hypnosis technique as a non-pharmacological strategy to reduce pain and distress in pediatric oncology patients. The hypnosis technique was applied by properly trained nurses, resulting in a reduction in self-reported pain, observed by parents, in pain reported by parents, in pain observed and in distress reported by parents, however these reports occurred only when applied by nurses with mastery of the hypnotic technique. There was also a reduction in pain and anguish in the short term. The technique can be effective when the applicator has mastered hypnotic practice, so skills must be reinforced for there to be a long-term benefit.

Patients with bone metastasis often experience constant pain. These pains can be neuropathic, somatic and even mixed. Persistent pain gives the patient a worse quality of life. When undergoing treatment, there is consequently a loss in the performance of physical activities which consequently generates secondary complications for the patient such as an increase in the level of fatigue, an increase in body fat which will cause greater vulnerability. As a way of not reducing your quality of life too much, radiotherapy and chemotherapy sessions are often recommended, however they are not the only options. The authors presented body massage, exercises and hypnosis as means of controlling pain as non-pharmacological treatment options (MARTIN-PEREZ et al., 2021).

Breast cancer has a significant impact on women's lives, affecting them emotionally, physically and spiritually, both during treatment and after, resulting from living with stress, uncertainty and fear of cancer recurrence, leading to a psychological suffering and, consequently, an increase in rates of psychopathology. A considerable number of women report chronic neuropathic pain after treatment, which can be caused by primary damage to the nervous system or neuronal dysfunction due to damage to nerve fibers, related to the side effects of chemotherapy, radiotherapy and/or surgery. This chronic pain is treated with medications such as tricyclic antidepressants and serotonin-norepinephrine reuptake inhibitors, followed by opioids. However, these conventional pharmacological interventions do not generate a sufficient response to cease symptoms, making alternative methods necessary for managing this pain. Among these interventions, mindfulness has shown promise and can contribute to changes in pain perception, altering areas of the brain

that are responsible for processing pain, such as the prefrontal cortex, through increased emotional modulation and attention control. In addition to mindfulness, this method is based on the training of thoughts, seen as mental events, to reduce stress and regulate emotional processing, allowing individuals to separate their thoughts and emotions, working on negative situations without anxiety rising., which could evolve into intense emotional suffering and stress.

Mindfulness, according to systematic reviews, had an effect on the pain of breast cancer patients, reducing its intensity, as well as reducing anxiety and depression and increasing the quality of life of these people (CONLEY et al., 2016).

Globally, approximately 55 million people are currently living with dementia. The underlying diseases are variable, with the main cause being Alzheimer's disease (AD), representing approximately 60%-80% of cases. Although dementias caused by various diseases have distinct profiles, they also share symptoms and pathologies often co-occur. People living with dementia not only face progressive cognitive decline, but also experience behavioral and psychological symptoms, including agitation, anxiety and depression, symptoms that deteriorate individuals' independence. Pharmacological treatments have shown limited effectiveness and, given the additional concern about side effects, it is worth investing in non-pharmacological interventions, including art-based interventions (MADHUSOODANAN, TING, FARAH et al, 2014).

Based on the observation of pain in patients with dementia living in long-term care institutions in Spain, González-Vaca et al. (2022) highlighted chronic pain as being prevalent and can worsen behavioral and psychological symptoms, as well as contributing to cognitive decline. This study analyzed a protocol of non-pharmacological interventions, including application of heat and cold, distraction techniques (music or TV), massage and transcutaneous nerve stimulation (TENS) for pain control in patients with moderate to severe dementia. As a result, it was found that these were effective with an 11% reduction in the frequency of pain regardless of other factors, such as pressure injuries.

It is worth noting that the study described above also highlighted the underdiagnosis of pain in medical records and the importance of self-reporting pain as a good indicator, even in patients with dementia.

In another study of the disease in rural Australian nursing homes, there was a significant reduction in aggressive behaviors and stress among residents, supporting the effectiveness of these approaches in specific contexts (ISAAC et al, 2021). This is a quasi-experimental (non-randomized, pre-post) study in five rural nursing homes in Queensland and South Australia, involving seventy-four dementia residents. The results indicated a statistically significant reduction in aggressive, non-aggressive behaviors, verbally agitated behaviors, and the habit of hiding objects or hoarding. Additionally, there was a similar decrease in caregiver stress in the areas of aggressive behaviors, inappropriate behaviors, resident safety, and resource deficiency.

Papadopoulos et al. (2024) investigated the effectiveness of non-pharmacological interventions in relieving pain in patients with Amyotrophic Lateral Sclerosis (ALS). Pain is a common and impactful non-motor symptom in ALS patients, often underreported and undertreated. Although the focus of the article is non-pharmacological interventions, it mentions that there are no specific medications to treat pain in patients with ALS and that research on the pharmacological

treatment of pain in this population is still very scarce and also mentions non-opioid analgesics that are generally used as the first line of treatment, followed by opioids in cases of more severe pain.

The study above identified three main types of non-pharmacological interventions for pain relief in patients with ALS, namely: the practice of muscle strengthening exercises and aerobic exercises to improve cardiovascular function, the combination of aerobic exercises with strength exercises in a unique manual osteopathic intervention and treatment program with stretching, massage and joint mobilization techniques for general improvement in physical function and pain. The article highlights that pain, despite being a non-motor symptom, has a significantly negative impact on the quality of life of patients with ALS as it manifests itself in a constant and progressive manner, limits the ability to carry out daily activities, impacts sleep and general well-being and increases the risk of depression and anxiety, potentially further affecting emotional well-being. The systematic review and meta-analysis included five randomized controlled trials, but did not find sufficient evidence to support the use of non-pharmacological interventions for pain relief in this population. The authors highlight the need for more research, with larger samples and standardized methods, to determine the effectiveness of non-pharmacological approaches in treating pain in these patients. Furthermore, it suggests the importance of considering the patient's individuality since the response to pain is individual and that treatment must be personalized, considering the specific needs, preferences and conditions of each patient.

A study by Pirlotte et al. (2024) investigated interventions to minimize pain in ventilated neonates during tracheal suctioning, a necessary but potentially painful procedure. Non-pharmacological interventions investigated include gentle sucking, positioning, glucose delivery, breathing-synchronized sucking, and pacifier use. Gentle suction consists of applying a lower suction pressure for a shorter period of time; intentional adjustment of positioning consists of keeping the newborn in a comfortable and safe position during the procedure; glucose administration involves offering oral glucose before aspiration; Sucking synchronized with breathing consists of performing the suction at the moment the baby exhales, while the use of a pacifier involves offering the baby a pacifier during the procedure. The conclusion of the article is that there is still no conclusive evidence on the effectiveness of non-pharmacological interventions in relieving pain during tracheal aspiration in neonates, pointing to the low quality of available evidence, with few studies of high methodological quality.

Newborns, during hospitalization, suffer painful interventions that, when repeated and untreated, are capable of negatively affecting the individual's motor and intellectual development. Therefore, based on the limitations found regarding pharmacological interventions in this age group, non-pharmacological therapies are viable and recommended options. Olfactory interventions are viable as non-pharmacological pain relief strategies, given their neurological association with the limbic system, which, in turn, is related to the pain perception mechanism. The studies evaluated are based on painful procedures such as heel puncture, venous punctures, both and arterial punctures. The olfactory interventions were related to different odors, natural (breast milk, amniotic fluid, mother's smell and breast milk from other mothers) and artificial (vanilla, lavender and formula milk). The applications of the odor were not standardized across studies, varying depending on its application

in bottles with the odor inside, odor diffuser, cotton with the odor, mother's chest, among others. Getting used to the odor was necessary approximately 8 to 18 hours before the painful procedure (in the study, evaluated only with the artificial odors of lavender and vanilla). In the results, it was found that the alternatives presented were effective in reducing pain in conjunction with usual care compared to standard treatment, except exposure to the odor of amniotic fluid. In comparison between the familiar odor and the unfamiliar artificial odor, there was no significant discrepancy in pain regulation. However, there was evidence that stated that familiar odor, compared to standard care, significantly reduces pain reactivity in premature babies. It was concluded by the study in question that the use of the odor of breast milk and an artificial odor with a habituation period were the most effective in relieving procedural pain in babies. Furthermore, olfactory stimulation can be used in combination with other non-pharmacological methods to increase their effectiveness in reducing pain. Overall, the quality of study evidence ranged from low to very low due to the high risk of bias, high statistical heterogeneity, and small sample size in the included studies (DE CLIFFORD-FAUGERE et al., 2020).

The recommendations of Kundakci et al. (2022) were based on expert consensus on non-pharmacological interventions to treat fibromyalgia. The study used the Delphi method with experts from Europe, North America and Israel. After three rounds of voting, thirteen non-pharmacological interventions were recommended for pain, ten for fatigue, eleven for sleep and ten for depression, in the management of morbidity. They highlighted aerobic exercise, education, sleep hygiene and cognitive behavioral therapy (CBT) as key treatments for symptoms such as pain, fatigue, sleep problems and depression in fibromyalgia. Furthermore, mind-body interventions, such as mindfulness, proved to be effective in specifically addressing depression, while other modalities such as music, relaxation, hot baths and local heat were recommended as auxiliary treatments depending on the variation in symptoms.

Some non-pharmacological measures were identified for patients diagnosed with osteoarthritis (OA), just like: health education about OA and self-management strategies, counseling and encouragement for physical exercise, maintaining a healthy weight and use of adjuvant treatments, such as application of heat or cold, modification of footwear and use of walking aids. There was an agreement on goals between the nursing professional and patients for the prescription of physical exercises, which were defined as specific, measurable, achievable, relevant and timely (SMART) goals. SMART weight loss goals were also agreed with overweight participants. The study generally achieved good adherence, with individual components receiving a high rating, except for adjuvant treatments (heat/cold and footwear advice) which received a moderate to low score (0-50%) across all sessions. Fidelity toward education was lowest in the first session but increased in follow-up sessions. Excellent fidelity was found in patient assessment, education, demonstration, and counseling about exercise and weight loss counseling. Furthermore, the definition and execution of goals in physical exercise was the one with the lowest fidelity. Agreement between nurse and evaluator was below the 80% cutoff point for education, exercise, weight loss, adjuvant treatment and review and planning, which invalidated the conclusion about interventions within these specific implementations (NOMIKOS et al., 2021).

According to Xu J et al (2022), knee osteoarthritis (KOA) can be evidenced as a common and disabling condition that often manifests with episodes of pain around the joints, being a typical condition that can result in chronic pain. The prevalence of KOA is significantly high among elderly people, with reported frequencies of 30% to 50% in this age group. This high incidence imposes a great personal and socioeconomic burden. Patients' ability to move is often limited by chronic distress, which worsens pain symptoms. Around 25% of patients with KOA experience intense joint pain for more than three to six months, being more susceptible to symptoms of depression, anxiety and insomnia, so non-drug therapies are one of the treatments recommended by several guidelines for the condition. Current studies show that massage therapy is an effective intervention, with a positive effect on treating symptoms such as pain without a specified course, stiffness and dysfunction. Massage has no major risks or side effects, and has the characteristics of high safety, low cost and convenient operation, and even has certain advantages for patients with drug allergies.

Heart rate variability biofeedback is an effective non-pharmacological intervention in the management of chronic diseases, as it is a health biomarker that informs about the activity of the autonomic nervous system, which, in turn, is functioning irregularly. (dysautonomia) during the course of chronic diseases. This non-pharmacological measure aims to stimulate parasympathetic activity, especially of the vagus nerve, to seek to regulate heart rate variability in individuals affected by a chronic disease, preventing its progression and worsening.

Among its results, the method presented, in relation to pain, the reduction of refractory pain in patients with fibromyalgia, Bowel syndrome and shoulder-neck pain related to stress, with effects of up to 3 months. However, the studies found differ from others that did not reveal a significant reduction in pain in patients with various chronic disease profiles (FOURNIÉ et al., 2021).

In the rheumatic scenario of ankylosing spondylitis, in which there is the presence of pain due to the progressive inflammatory process, it was seen in a study that physical exercises such as movement activities, walking, running, Nordic walking, swimming, cycling, dancing and water exercises, contributed to the improvement of the clinical picture, being well tolerated by patients. Furthermore, it is possible, within the scenario of non-pharmacological interventions to reduce pain, to practice intense interval training, the McKenzie method, Dynamic Neuromuscular Stabilization (DNS), Acral Coactivation Therapy (ACT), pilates and tai chi chuan. The practice of these exercises must be carried out precisely and consistently, therefore, it is necessary to build a good relationship with the patient for their adaptation and implementation. Joint exercises were related to a decrease in disease activity and less joint damage, which therefore causes less pain. Furthermore, exercises to increase muscle strength, flexibility and respiratory capacity were able to improve pain, based on assessment by the Visual Analogue Scale (VAS). It is also possible, through studies, to combine physical exercise with the cryotherapy method to improve back pain and other symptoms (LÍŠKA, 2022).

Systemic Lupus Erythematosus (SLE) is a chronic disease that involves an autoimmune process and can present various symptoms that compromise the patient's quality of life, mainly related to generalized pain. People with SLE are less physically active, although exercise is used as a complementary treatment to pharmacological treatment in cases of the disease due to its anti-inflammatory benefits.

In the study in question, the exercises were used solely or combined in combination, related to resistance training, aerobic training and amplitude training, with prescription according to frequency, intensity, time and type. In addition, other forms of exercise were considered, such as sports, games and recreational activities such as dancing, bowling and Wii fit. In the study, participants were divided into analysis groups ("exercise and usual pharmacological care versus only usual pharmacological care", "exercise and usual pharmacological care versus placebo and usual pharmacological care" and "exercise and usual pharmacological care versus other non-pharmacological intervention and usual pharmacological care") and the results indicate that exercise resulted in little or no difference in pain, configuring low evidence. However, the quality of the evidence presented is restricted to low to very low quality (FRADE et al., 2023).

Dance therapy is a type of physical exercise that uses movement as a psychotherapeutic tool to promote integration, based on the assumption of interconnection between an individual's body and mind. When performed with music, this can become especially motivational. Therefore, dance therapy as a modality of physical exercise can have physiological benefits that improve physical and mental health (COSTA et al., 2022).

Neurofeedback influences the modulation of pain messages that reach the brain, while virtual reality is a technology that has been used in several studies to reduce acute pain, blocking negative thoughts and feelings, in addition to acting as a distraction and emotional regulator (GOLDMAN -RAKIC, 1996). The combination of these two tools as a non-pharmacological treatment contributed to a significant improvement in pain during follow-up, improving depressive symptoms and anxiety, in addition to reducing the amount of medication used by the patient. This analgesia may be related to the increase in dopamine that occurs when the individual is experiencing distraction and excitement, proving effective as sustained analgesia, increasing adherence in patients with chronic pain who seek non-pharmacological analgesia alternatives and, in addition, providing pain relief and also reducing polypharmacy throughout treatment.

Finally, there are several barriers to implementing non-pharmacological pain management interventions in various health care centers. Tohol et al. (2023) analyzed obstacles from the perspective of intensive care nurses in Palestine. The 2020 study revealed that although more than two-thirds (60%) of nurses reported using methods such as distracting the patient with light music/ watching TV, performing acupuncture/ acupressure/reflexology, positioning the patient comfortably, and communicating with the patient and family, the same professionals exposed the existing obstacles to the more common practice of non-pharmacological interventions. The main barriers were the lack of time and the high workload, accompanied by a lack of education. It was also observed that both a younger age of nurses and greater contact with spirituality were associated with the more effective use of non-pharmacological methods for pain management, demonstrating that the experience and personal experience of professionals is a significant factor in increasing the use clinical practice of these techniques. Likewise, one can optimistically analyze the fact that younger health professionals apply these techniques more frequently, allowing the analysis of a current trend of gradual improvement in the pain management scenario.

FINAL CONSIDERATIONS

Non-pharmacological interventions can be extremely valuable tools in managing the pain of patients in palliative care in a complementary way to drug treatment. Advances in knowledge and use of these strategies can improve the clinical condition and lives of people in moderate and advanced stages of serious life-threatening illnesses. It is therefore necessary to inform professionals from the beginning of their training, including palliative care in the undergraduate curricula of courses in different areas of Health, as well as guide, train and inform caregivers, companions and family members of the real meaning of palliative care during hospitalizations. or also in-home treatments.

There are limitations regarding its use, training and necessary equipment for health professionals to master the techniques, so that there is a growing need for ongoing education to better approach patients, in addition to pharmacological strategies for pain control, always taking into consideration, autonomy, ability to choose, the clinical state, the patient's level of consciousness and the level of knowledge of the family and caregivers on the topic.

The analysis of studies in this area still has some difficulties, such as small sampling of the vast majority of research, non-standardized techniques, variability of cases, diseases, staging and age range of individuals and the perception of pain itself, which is subjective and difficult to assess. be measured objectively. It is worth highlighting that pain management and procedures and treatments in Palliative Care also need to be problematized in different institutional spaces (public and private) because there are nuances and different interests in approaches, treatments and directions.

The recent approval of the National Palliative Care Policy (2024) within the scope of the SUS represents a milestone for the future qualification of many matrix teams throughout the national territory and expansion of care by health professionals from various areas in search of more humanized assistance and with fewer barriers to ensuring quality of life for people suffering from chronic and serious illnesses. But this path will be long and full of setbacks, as it will still take a long time for this training (mainly of health professionals since graduation) and awareness (of family members, caregivers and society), taking into consideration, the other difficulties faced by the SUS (Unified Health System) and the interests surrounding the issue. Discussing Palliative Care and the impasses experienced by subjects, families and society in the face of finitude or suffering is not a simple task.

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