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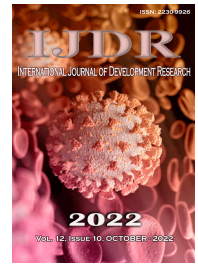
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RESEARCH ARTICLE

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IMPACT OF PHYSIOTHERAPY ON THE QUALITY OF LIFE OF DEPRESSIVE PEOPLE: A LITERATURE REVIEW

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ABSTRACT

Introduction: Depression is considered a mental health problem. It is a pathology with multifactorial causes whose symptoms are considered complex. **Objective:** To investigate, through a literature review, the effects of physical therapy modalities on the quality of life of depressive patients. **Methodology:** This was a literature review with a qualitative approach carried out in January/2019. The selected material corresponds to articles available in the SCIELO – BR, PubMed, PEDro and Cochrane databases. To operationalize the search for articles, the following DeCS descriptors were used followed by the Boolean marker and: depression and quality of life and physical therapy. After searching the databases, 19 articles were found. 3 surveys were excluded. **Results:** the bibliographic material used as a substrate of analysis for this literature review study consisted of 16 scientific articles read in full. Thus, 9 observational studies and 7 experimental studies were analyzed that aimed to evaluate the impact of Physical Therapy on the quality of life of depressive patients. **Final Considerations:** Realized that the exercise used as a therapeutic proposal can be effective in the adjuvant treatment of depressive patients recovering, among other benefits, their quality of life. In addition, the release of endorphin and serotonin can provide a feeling of pleasure and well-being to the individual. It is also concluded that more research should be carried out on this topic to support the physical therapist professional in this outcome.

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INTRODUCTION

Depression is considered a mental health problem that presents as a clinical picture a wide range of problems characterized by the absence of positive affect, persistence of mood and a series of associated emotional, cognitive, physical and behavioral factors. Thus, depression is understood as a disease characterized by adverse clinical outcomes (AMBAW et al., 2015; COONEY et al., 2013; YOUNG; SKORGA, 2013). This pathology is a common cause of comorbidity and mortality among the population. Currently, about 121 million people in the world are affected with this problem. There is, therefore, a great impact of this pathology also at an economic level (COONEY et al., 2013; YOUNG; SKORGA, 2013). Previous research has linked depression, considered a public health problem, to cancer, chronic obstructive pulmonary disease (COPD), tuberculosis, schizophrenia, and Alzheimer's.

Thus, it is understood that preexisting pathologies can trigger depression (ABD EL-KADER; AL-JIFFRI, 2016a; AMBAW et al., 2015; GORCZYNSKI et al., 2011). In addition, it should be emphasized that this mental pathology becomes more common among the elderly and its clinical picture differs when compared to young adults. It is also noteworthy that depression is associated with physical illnesses in a chronic state⁵. In addition to pre-existing pathologies in the development of depression, it is common to observe this mental pathology among students. According to Leão et al. (2018) among health courses, Physiotherapy students are the most affected by the disease. Thus, the presence of this problem is also observed among the young population. Nevertheless, previous research demonstrates depression as a pathology that diminishes the competence of the patient's immune system. Therefore, there is an exposure of this to other pathologies (AMBAW et al., 2015). In view of all these evidenced data, depression is understood as a pathology with complex symptoms that favor the reduction of the patient's quality of life. Furthermore, it is known that quality of life is an

important factor for longevity. Thus, depressive patients are exposed to a higher risk of illness and mortality (SI *et al.*, 2015). Basically, depression is treated with antidepressant medications. However, other forms of treatment, considered non-pharmacological, are shown to be alternatives in the management of this disease. Among them, exercise-based interventions stand out. Therefore, according to previously published research, the latter may prove to be an adjunctive therapy in the treatment of depression⁶. Physical exercise proves to be an effective policy in reducing fatigue, anxiety, depression and inducing a better picture of well-being in the patient. Thus, given the previously validated data, it is known that exercise-based therapy (therapeutic exercise) reduces depressive symptoms (AKEL *et al.*, 2017; GORCZYNSKI *et al.*, 2011; MURA, 2013). In addition, daytime napping is suggested as a preventive measure for the disease (LIU *et al.*, 2018). The choice of the investigated object of study stems from the identification of a gap in the national and international scientific production aiming to evaluate the efficiency of the Physiotherapy modalities regarding the quality of life of depressive patients. Furthermore, according to Young, Skorga (2013), it is necessary for the general population to invest in interventions to reduce the impact of depression on mental health conditions. Given the few studies carried out and published on this topic, health professionals still have difficulties in dealing with this disease (LEÃO *et al.*, 2018). Thus, the present research aims to investigate, through a literature review, the effects of Physiotherapy modalities on the quality of life of depressive patients. Therefore, the study is relevant because of the potential to contribute to the theoretical, technical, and practical reflection and improvement of the Physiotherapy professional who, in his clinical practice, will perform the care of patients diagnosed with depression or with causal factors of this pathology. Furthermore, as it is a bibliographic study, it will contribute to the systematization of scientific production, as well as being able to generate new knowledge, allowing the reduction of the evident gap in terms of scientific dissemination in this area.

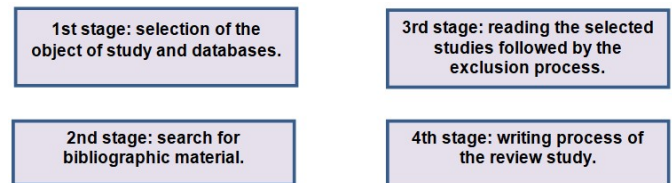
METHODOLOGY

It was literature review research, with a qualitative approach. The research followed a systematic four-step procedure with the objective of enabling the solution of the problems currently found in the management of this theme, to contribute to the social, cultural, and scientific growth of society. In the first moment of the research, the selection of the research object and the databases in which the studies were carried out were selected. During the second moment of this review study, a search for bibliographic material was carried out. After the formation of the research material, the process of reading and application of the inclusion and exclusion criteria began. In the fourth moment of the present review, the study writing process took place (flowchart 1). In this literature review, data collection took place in January/2019. However, the period considered for this research comprised a time lapse of ten years. Thus, studies published in indexed journals between 2008 and 2018 were considered. The selected material corresponds to articles available, initially, in the following databases: Scientific Electronic Library Online – Brazil - SCIELO – BR, PubMed, Physiotherapy evidence database (PEDro) and Cochrane. To operationalize the search for articles, the following DeCS descriptors were used followed by the Boolean marker and: depression and quality of life and physical therapy. This strategy allowed collecting data on the topic proposed in this investigation, to analyze the positive impact of Physiotherapy modalities on the quality of life of individuals diagnosed with depression and/or with causal factors of this pathology. All articles published in indexed journals in the period 2008-2018, published in English or Portuguese, available in full, and publications that presented the selected descriptors were included, excluding duplicate articles and articles that, although they coincided with the descriptors adopted, were included. did not allow solving the problem of the study. However, after surveying the material, consisting of 19 scientific articles, a reading of the abstracts of the studies was carried out and criteria for inclusion and exclusion of publications that constituted the substrate of research analysis were applied. After reading, three studies were

excluded. Thus, 16 articles were considered for the development of this research.

The systematic processing of this review study, as proposed by Azevedo, (2001) follows an order of data presentation and development, whose steps are as follows:

- **Introduction:** the theme is delimited, and problems related to the outcome of the research are indicated.
- **Development:** summarizes the information offered and highlights the authors' central lines of thought.
- **Criticism:** consists of highlighting the progress or misunderstanding of the authors, indicating paths to be followed in the research of the subject and global evaluation of the same (AZEVEDO, 2001).

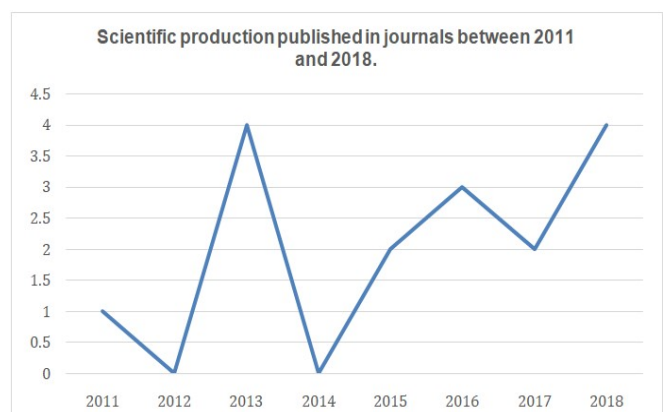


Flowchart 1. Description of the steps systematically followed by this bibliographic review study. Palhano - CE. 2018

Tables were prepared in the Word 2016 program. The graphs exposed in this research were prepared in the Excel 2016 office with the objective of trusting the quantitative data of this literature review research. The organization and reading of the empirical material were carried out using the Mendeley Desktop research aid program.

RESULTS AND DISCUSSION

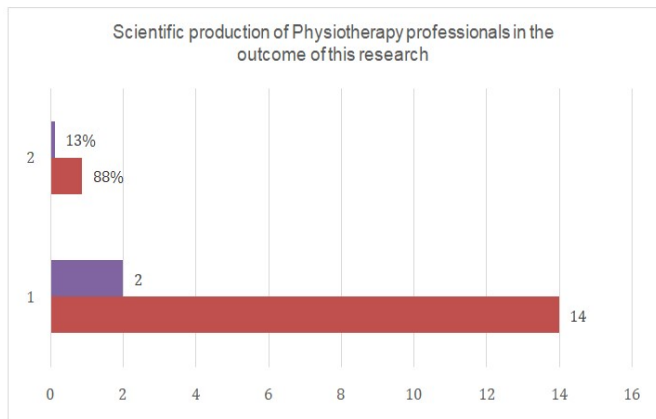
The bibliographic material used as a substrate of analysis for this literature review study consisted of 16 scientific articles read in full. After an exhaustive reading of the research, a meta-analysis was carried out with the objective of comparing the findings of the research published between the time lapse of 2008 and 2018. This strategy allowed to investigate and understand the most relevant results in the research of the last 10 years regarding the impact of Physiotherapy on the quality of life of patients diagnosed with depression. From the proposed investigation, it was realized that for many centuries mental health care was expressed in an asylum and hospital-centered model (CIRILO *et al.*, 2018). Thus, new treatment possibilities for patients with mental disorders need to be clarified through further research.



Graph 1. Analysis of scientific production regarding the impact of Physiotherapy on the quality of life of depressive patients. Sample/2018. Palhano – CE

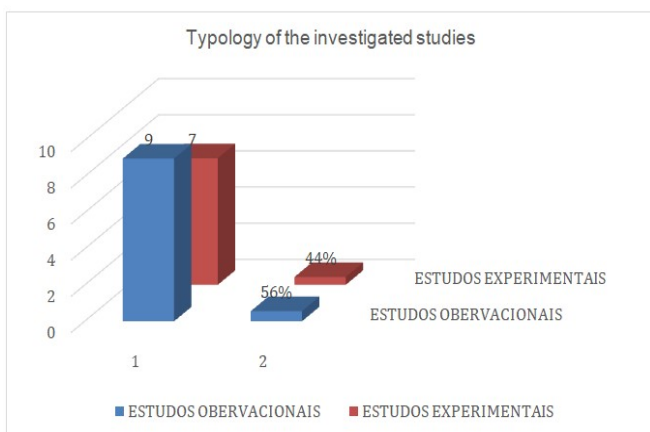
The graph shows an oscillation in national and international scientific production with the aim of clarifying new possibilities of treatment

offered to patients diagnosed with depression. It was found that in 2011 there was a publication with this outcome. However, in 2012, with no published studies, the same was not observed. The following year, 4 surveys were released. However, in 2014, again, no study was analyzed in publication. In the 2015/2016 biennium, there was an increase from two to three studies, respectively, which suggests a return of scientific concern in the analysis of this theme. However, in 2017 only two studies were published. However, 4 studies were analyzed in 2018. Thus, there is a new increase in research with the same objective as this review study. Of the 16 studies analyzed as empirical material for this research, 2 had at least one physical therapist researcher. This indicates a small scientific production, consisting of only 13% of Physiotherapy in the thematic referent of this research. In addition, these studies were published in 2016.



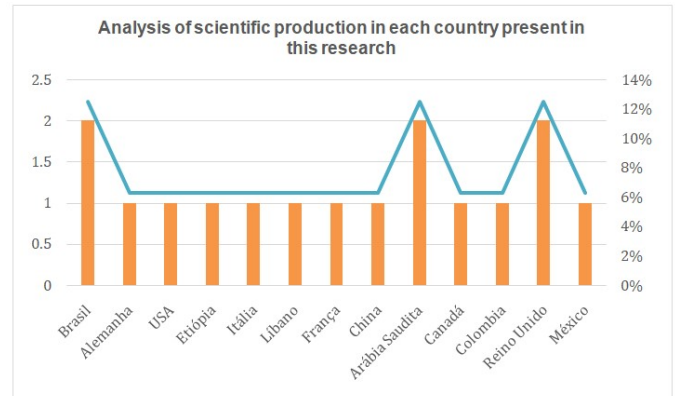
Graph 2. Analysis of the scientific production of Physiotherapy professionals in order to investigate the impact of physiotherapeutic interventions on the quality of life of depressive patients. Sample/2018. Palhano – CE

In view of these evidenced data, it is known that 88% of the studies carried out between 2008-2018 with this outcome are produced by professionals from other areas of health. Therefore, it is understood that, despite the growth of diagnosed cases of depression (COONEY et al., 2013), studies on this topic currently do not evolve simultaneously with the diagnosis of cases. These evidenced data corroborate other research, concluding that in the last 20 years there has been little progress seeking to demonstrate the effectiveness of physical activity as a treatment proposal for depressive patients (MURA, 2013). Considering all the studies analyzed, it was observed that, regarding the typology of the studies, 9 studies were observational and 7 had experimental characteristics. Thus, only 44% of the studies found in the databases considering the outcome impact of Physiotherapy on the quality of life of depressive patients were experimental.



Graph 3. Typology of the studies analyzed in this literature review research. Sample/2018. Palhano – CE (EXPERIMENTAL STUDIES OBSERVATIONAL STUDIES)

In view of this, it is understood that the majority, 56%, of the research carried out on this issue are observational studies. Therefore, the need for experimental studies to investigate this theme is emphasized. The scientific contribution of each country regarding this outcome can be verified through the graph presented. Thus, it is concluded that Brazil, Saudi Arabia and the United Kingdom are the countries where most researches were carried out investigating this problem. This contribution is quantified at 13% for each country mentioned above.



(Brazil, Germany, USA, Ethiopia, Italy, Lebanon, France, China, Saudi Arabia, Canada, Colombia, United Kingdom, Mexico)

Graph 4. Scientific production by country regarding the outcome investigated in this review study. Sample/2018. Palhano – CE

In view of these data, it is observed that depressive disorder can be a result of pathologies such as tuberculosis, cancer, chronic obstructive pulmonary disease (COPD) and Alzheimer's. Thus, investigating the causal factor of the disease becomes relevant in the discourse of its treatment. Furthermore, it is observed that of the 6 researches mentioned above, 4 are experimental. Aiming to estimate the prevalence and factors associated with depression and anxiety in university health students, Leão et al. (2018) investigated, through a cross-sectional survey, 476 students from Biomedicine, Nursing, Physiotherapy, Medicine and Dentistry courses. In this study, it was found that students who were less satisfied with the course were almost four times more likely to have depression. Risk factors such as unsatisfactory family relationships, insufficient sleep and unsatisfactory relationships with friends were also highlighted. In addition, this same aforementioned study demonstrates the absence of physical activity as the risk factor with the greatest impact for the onset of depression and anxiety among students (LEÃO et al., 2018). "The prevalence of anxiety and depression among health students was much higher than the general population, with Physiotherapy students having the highest result" (LEÃO et al., 2018. p. 55-65). The same study also concludes that these future professionals need to be technically and emotionally well prepared to deal with human health.

Thus, it is evident that students from different areas of health are more susceptible to developing depression when compared to the rest of the general population. This research also suggests a more humanized training for students from different areas of health where students can receive pedagogical and emotional support (LEÃO et al., 2018). Concluding in a clinical trial, ABD EL-KADER and AL-JIFFRI (2016) claim that a home exercise program, 5 days a week for 30-45 min a day used as therapy for depressive patients was effective in reducing the symptoms of depression than 150 individuals resistant to traditional treatment. In view of this, the positive impact of therapeutic exercise in this population is understood. On the other hand, there is a need for more clinical studies to understand the influence of variables such as disease degree, time of diagnosis, lifestyle, comorbidities, exercise dosage, among other factors. Mura (2013) emphasizes that, despite little scientific evidence with this outcome, there are promising results where exercise can be used as a therapeutic proposal in cases of depression. In view of this, further research on this topic is encouraged in order to support the physical therapist in the management of this problem.

Table 1. Scientific production that associated depression with the emergence of other diseases. Sample/2018. Palhano – CE

AUTHOR	TITLE	TYPE OF RESEARCH	YEAR
Danhauer, S. C. Et al.	Review of yoga therapy during cancer treatment.	Observacional	2017
Carlson, I. E.; cohen, M. R.; deng, G.	Treatment	Observacional	2018
Abd el-kader, s. M.; al-jiffri, O. H.	Aerobic exercise improves quality of life, psychological well-being and systemic inflammation in subjects with alzheimer's disease.	Experimental	2016b
Akel, R. Et al.	Anxiety, Depression and Quality of Life in Breast Cancer Patients in the Levant	Experimental	2017
Abd el-kader, s. M.; al-jiffri, O. H.	. Exercise alleviates depression related systemic inflammation in chronic obstructive pulmonary disease patients.	Experimental	2016a
Ambaw, F. Et al.	Depression among patients with tuberculosis: Determinants, course and impact on pathways to care and treatment outcomes in a primary care setting in southern Ethiopia - A study protocol.	Experimental	2015

However, as emphasized by Carayol et al. (2013), it is necessary to focus on the duration of adjuvant therapy and investigate the ideal dose of exercise for this population. Other research analyzed in this literature review study demonstrates Yoga and massage for the reduction of depressive disorders in patients diagnosed with breast cancer undergoing treatment. However, it concludes that little evidence is available on this topic. In view of this, the need for growth in scientific production in this outcome is emphasized (CARLSON; COHEN; DENG, 2018). In this same line of research DANHAUER et al. (2017), emphasizes that Yoga reduced depression, anguish and anxiety in adult patients diagnosed with any type of cancer. In addition, this research indicates that Yoga can promote a better quality of life for individuals. However, it is necessary to strengthen the study on this topic to highlight the outcome of Yoga in this population. In view of these evidenced data, it is understood that physical activity can be suggested for maintaining health and stress control, as well as indicating this practice as an adjunct in the treatment of depression. It is also noted that physical activity, when practiced regularly, helps in the production of endorphin and serotonin which, in turn, are neurotransmitters responsible for the sensation of pleasure and well-being. Therefore, it is known that physical activity is included as a management strategy for depressive patients (LEÃO et al., 2018; MURA, 2013). Depression is understood as a multifactorial factor. Considering the same disorder arising from breast cancer, therapeutic exercise reduces its clinical symptoms (CARAYOL et al., 2013). In this way, the intervention with exercises proves to be effective in depressive cases independent of their home.

In addition, physical activity is usually an important opportunity for social interaction, bringing fundamental benefits present in the establishment of affective interactions. Therefore, the practice of physical activity is seen by the medical community as an important predictor or therapeutic agent for depression (LEÃO et al., 2018; p. 55-65).

Thus, intervention with therapeutic exercises for patients diagnosed with depression can emphasize social interaction with the objective of helping to improve the clinical condition of this population through the recovery of their quality of life. This improvement in the depressive condition as a result of therapeutic exercise may be associated with the correction of central monoamines that it performs. Thus, exercise can improve quality of life and psychological well-being (ABD EL-KADER; AL-JIFFRI, 2016b).

FINAL CONSIDERATIONS

From this study, depression is understood as a mental health disorder with a multifactorial cause and complex symptomatology that favors the reduction of the quality of life of the population diagnosed with this problem. In addition, it is also known that depression is associated with physical illnesses in a chronic state. Basically, depression is treated with antidepressant medications. However, other forms of treatment, considered non-pharmacological, are shown to be alternatives in the management of this disease. Among them, interventions based on exercises that promote the release of endorphins and serotonin stand out, which, in turn, are

neurotransmitters responsible for the sensation of pleasure and well-being. In view of this, this bibliographic review study realized that the exercise used as a therapeutic proposal can be effective in the adjuvant treatment of depressive patients recovering, among other benefits, their quality of life. However, most of the analyzed studies are observational. Thus, the need for experimental studies to solve this problem is emphasized. It was also analyzed an inconsistency in the scientific production in this outcome. Regarding the country of origin of the researches reviewed, it was observed that Brazil, Saudi Arabia and the United Kingdom are the ones that contributed the most to the understanding of the theme. Therefore, physical exercise helps in the treatment of depressive patients. In this way, the physical therapist can strengthen the multidisciplinary health team in the treatment of depression. Nevertheless, the present research emphasizes the need for further studies that aim to clarify variables such as lifestyle, time of diagnosis, causal factor of depression, age, weight, type and dosage of exercise and associated comorbidities.

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