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THE RELATIONSHIP BETWEEN ANXIETY AND PAIN DISORDERS: AN INTEGRATIVE REVIEW

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ABSTRACT

Introduction: Somatic Symptom Disorder is characterized, by the Fifth Edition of Diagnostic and Statistical Manual of Mental Disorders, by distressing somatic symptoms linked to abnormal thoughts, feelings and behaviors in response to these symptoms. The prevalence of generalized anxiety disorder in primary care is quite significant, and new empirical evidence suggests that there is a clinically relevant interaction between anxiety and pain intensity felt by the patient in a context of somatization of symptoms. **Objectives:** To analyze in the literature the relationship between anxiety disorders and psychosomatic pain. **Methodology:** The research was carried out in the CAPES Periodic databases, PubMed and Regional Portal of the VHL. The terms “Anxiety Disorders”, “Pain” and “Psychophysiological Disorders” were considered as descriptors. Articles published between 2013 and 2018 were included. **Results:** Of the 2095 articles found, only seven were included in the review. Evidence has been found that anxiety may stem from social distress or primary pathologies. It can be expressed somatically under different forms of pain, such as: gastrointestinal, precordial, dental or cephalic. Evidence has also been found that anxiety exacerbates dental and cephalic pain, and it chronicises localized back pain and cephalic pain. **Conclusion:** The literature on the interaction between anxiety and psychosomatic pain is still incipient to the detriment of the complexity and comprehensiveness of the phenomenon. We also highlight the need for further research on diagnostic and therapeutic teaching strategies of health professionals in order to reduce the morbidity resulting from these events.

Keywords: Pain, Anxiety Disorders, Psychophysiological Disorders

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INTRODUCTION

Health is a complete physical, mental, social well-being state and not just the absence of disease or infirmity. Mental illness affects people of all nations and at all levels. The psychosomatic term is derived from the Greek words: psyche and soma. "Psyche" in the early days meant "Soul or mind" and "Soma" refers to the "physical organism of the body". It has been known for centuries that the psychological / emotional factors are related to many physical ailments. (1)

According to Velasco, R.V., in a study conducted in 2016 with 203 Latino adults, showed new empirical evidence suggesting that there is a clinically relevant interaction between anxiety and pain intensity in a primary care physician setting. (2)

The prevalence of generalized anxiety disorder in primary care in the US in 2007 was 7% to 8% and most patients complained of physical symptoms rather than worry or fear. (3) Still in primary care, 25 to 33% of patients suffer from disease not fully explained by diagnostic tests. However, few health professionals have had formal training for these issues. Clinicians who are familiar with such cases can achieve a much better result for their patients. (5)

In this sense, it is stated that the knowledge about the relationship between anxiety and somatoform pain can, in a way, corroborate the production of new research on the subject and foment the formation of more specialized professionals to this problem. Thus, the present study aims to analyze in the literature the relationship between anxiety disorders and psychosomatic pain.

MATERIAL AND METHODS

For the study, an integrative literature review was carried out which, according to Mendes and Silveira, (5) corresponds to an analysis from secondary sources of information with the purpose of gathering and synthesizing results of research on a delimited theme or issue. The search was performed in three stages, the first

one related to the choice of databases and descriptors. Three databases were chosen that supported the research: Portal of Periodicals of the Coordination of Improvement of Higher Education Personnel CAPES / MEC; International Database PubMed and Regional Portal of the Virtual Health Library BVS. The descriptors selected for conducting the research were extracted using the Health Sciences Descriptors database (DeCS). The following were considered: "Anxiety Disorders", "Pain" and "Psychophysiological Disorders" were used in Portuguese or English through of the use of the boolean "AND". The selection was restricted to articles published in Portuguese, English or Spanish in the period between 2013 and 2018.

The second stage of the research consisted in defining the inclusion and exclusion criteria, namely: Inclusion: a) texts whose abstract was available for reading; b) without restriction of limits in the search relative to the place of accomplishment of the study. Exclusion: a) studies published in the form of editorials, interviews, clinical notes, studies and case reports; b) other review studies; c) studies that do not present relations between somatoform pain and anxiety.

In the third stage, the reading, analysis and interpretation of the complete texts was based on four parameters: (a) critical appreciation of the material; (b) decomposition of the essential elements; (c) grouping and classification; (d) final analysis.

The studies were interpreted individually by two researchers. When disagreements were observed between them, a joint reading was done to form a concordance as to whether or not to include the article. At the end, 2095 articles were identified. The most relevant basis for the work was the CAPES Periodicals with 1011 manuscripts, but after reading the texts, only 7 articles were actually included in the review. The flowchart (Figure 1) below presents the literature review process and the selection of articles in this review.

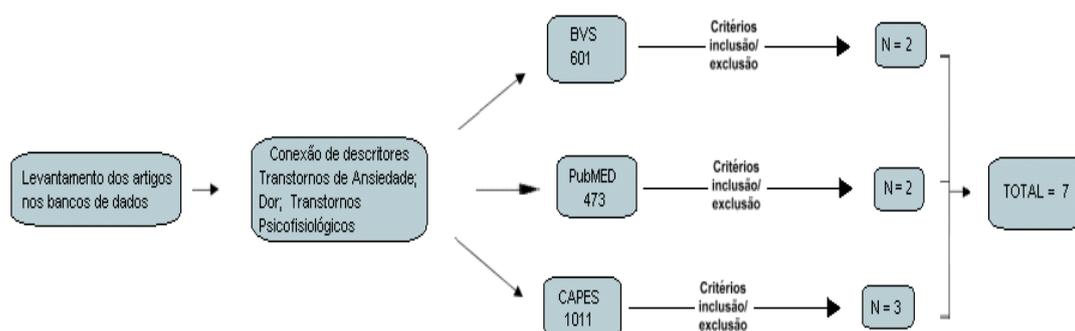


Figure 1 - Schematic representation of bibliographic survey and article selection

RESULTS AND DISCUSSION

Table 1 summarizes the information of the articles included in this review. It is noteworthy that there were no articles from Brazil selected, nor in the Portuguese language, which demonstrates the need to expand studies at national and international levels. All articles selected showed correlations between anxiety and pain, either by genesis, exacerbation or perpetuation of the pain mechanism.

According to ULLMANN, the highest anxiety score found in German Jewish families occurred due to social exclusion and anti-Semitism. This context corroborated the pathogenesis of epigastric, pericardial and limb pain. In this case, anxiety acted as a predisposing factor of somatoform pain disorder (6). In a similar finding, SOBANSKI concluded that pseudocardiac symptoms, which are psychosomatic, as precordial pain were more frequent in the population suffering from anxiety related mainly to stressful life events (7).

THIEME concluded that the groups of patients with fibromyalgia, responding to stressors due to hyperreactivity of blood pressure and high basal muscle reactivity presented higher levels of anxiety. These groups, coincidentally, also presented greater pain complaints than the other patients diagnosed with fibromyalgia. However, the author did not establish a cause and effect relationship between pain and anxiety (8).

In the study by VINIOL, anxiety did not contribute to exacerbation of pain in patients with chronic localized low back pain or localized generalized pain progression (9). However, there was a correlation between anxiety and the genesis of localized chronic pain. Also for MONZANI, anxiety played a very important role in the establishment of tension-type headache pain and its consequent chronification (10). CHONG, reiterated that patients with ESRD are more prone to anxiety syndromes. It also positively correlated the incidence of anxiety with that of mainly high but also low gastrointestinal psychosomatic symptoms (11).

The influence of dental anxiety on postoperative pain was analyzed by DIERCKE. Their study concluded that anxiety strongly influenced patients' increased perception of pain. However, few dentists reported using anxiety reduction techniques, and only 2% reported referrals to psychotherapists. This demonstrates a greater need for class awareness of the influence of anxiety on psychosomatic pain (12).

Based on this, it is observed that the literature in the last 5 years correlating anxiety disorders, psychophysiological disorders and pain is not conflicting. Despite this, many health professionals have difficulty in establishing the diagnosis or therapy of patients presenting with pain complaints in the context of anxiety, from basic care to specialty outpatient clinics. It is

recommended the participation of health professionals in continuing education courses on the question of the influences between pain, anxiety and somatoform disorders. In this way, professionals will optimize their professional approach for the correct psychological treatment and will more often refer their patients to psychotherapists.

Table 1 – Analysis of the content of the publications as authors, year of publication, title, study design / location, and the authors' conclusions obtained in each study.

Author/ year	Title	Study Design / Location	Authors' conclusions on the effect of anxiety on psychosomatic pain
ULLMANN E. et al.; 2013	Increased rate of depression and psychosomatic symptoms in Jewish migrants from the post-Soviet-Union to Germany in the 3rd generation after the Shoa	A prospective observational study / Germany	Higher anxiety score was found in Jewish immigrants in Germany and higher prevalence of anxiety (7.9%) in individuals of Jewish family. Also, higher prevalence of depression, psycho-cardiac problems, fatigue symptoms, limb pain and epigastric pain were found. The study concludes that social exclusion caused by anti-Semitic experiences is associated with a high psychosomatic susceptibility.
THIEME K. et al.; 2015	The Relationship Among Psychological and Psychophysiological Characteristics of Fibromyalgia Patients	Cross-sectional study / USA	The study separated 120 female patients diagnosed with fibromyalgia in 4 groups. Groups 1 and 4 presented the highest anxiety rates, being composed respectively by response patterns: hyperreactivity of blood pressure and high basal muscle reactivity. Group 1 presented the highest complaint of pain intensity and the second highest percentage of anxiety. The author has not established a cause and effect relationship between pain and anxiety.
SOBANSKI S. J. A., et al.; 2015	Complaints of neurotic patients that are of interest for a cardiologist	Retrospective observational study / Poland	The authors concluded that pseudocardial psychosomatic symptoms occurred more frequently in the female population with anxiety disorders. The most prevalent symptoms were palpitation, tachycardia and precordial pain. Often these symptoms were accompanied by stressful life events.
VINIOL A., et al.; 2015	Even Worse — Risk Factors and Protective Factors for Transition from Chronic Localized Low Back Pain to Chronic Widespread Pain in General Practice	Prospective cohort study / Germany	Three risk factors were identified: female gender, long duration of back pain and a high rate of psychosomatic symptoms, for the onset of generalized pain among patients with localized low back pain. The authors have identified that anxiety has more effect on the establishment of chronic pain itself and little influence on the transition from an already chronic stage of LLBP to GD.
MONZANI L., et al.; 2018	Anxiety and the severity of Tension-Type Headache mediate the relation between headache presenteeism and workers' productivity	Clinical Trial / USA	Tension-type headache is caused by increased tension in the muscles adjacent to the skull that occurs in states of anxiety. The authors concluded that workers with this type of headache are more likely to suffer from anxiety disorders and become less productive. Tension, when sustained by long periods of anxiety increases the chronicity of pain, thus its severity.
CHONG V. H., et al.; 2012	Prevalence of gastrointestinal and psychosomatic symptoms among Asian patients undergoing regular hemodialysis	Case-control study / Brunei	Patients with DRT are more prone to a variety of psychological symptoms like depression, anxiety and insomnia. There is also a higher incidence of low and high gastrointestinal psychosomatic symptoms. The authors of the study were able to correlate significantly the presence of psychological disorders such as anxiety with a higher incidence of mainly high but also low or associated GI symptoms.
DIERCKE K., et al.; 2012	The management of dental anxiety and impact of psychosomatic factors on dentistry: Is recent scientific research translated into German dental practices?	Cross-sectional study / Germany	The authors have reported that psychological factors like anxiety, depression and stress are involved in pain in dental procedures. Higher levels of preoperative anxiety tend to cause more postoperative pain. 95% of dentists questioned reported that anxiety strongly influences pain perception, but only half reported using relaxation techniques to reduce anxiety, and only 2% reported directing anxious patients to psychotherapists.

CONCLUSION

It is considered, despite the importance of the theme, that the literature on the correlation between anxiety disorders, pain and psychophysiological disorders is still incipient. No Brazilian texts published in recent years

have been found on the research platforms. However, agreement was observed between the international literature analyzed.

In short, evidence has been found that anxiety can stem from social distress or primary pathologies. It can be expressed somatically

under different forms of pain, such as: gastrointestinal, precordial, dental or cephalic. Evidence has also been found that anxiety exacerbates dental and cephalic pain, and it chronicises localized back pain and cephalic pain.

We also highlight the need for further research on diagnostic and therapeutic teaching strategies of health professionals in order to reduce the morbidity induced by genesis, exacerbation or perpetuation of pain or somatoform disorders due to anxiety disorders.

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