

Impairment of quality of life due to anxiety and depression in patients with chronic pain

Comprometimento da qualidade de vida por ansiedade e depressão em pacientes com dor crônica

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ABSTRACT

BACKGROUND AND OBJECTIVES: Chronic pain causes functional and social disability, resulting in emotional impact. This study's objective was to describe the main impairments of activities of daily living, anxious and depressive symptoms, and quality of life in patients with chronic pain.

METHODS: Cross-sectional study with chronic pain outpatients. Analysis of clinical and sociodemographic variables, as well as activities of daily living. Assessment of pain, anxious and depressive symptoms by the Hospital Anxiety and Depression Scale, quality of life by the Medical Outcomes Study 36 - Item Short Form Health Survey questionnaire and data analysis by the SPSS statistical software.

RESULTS: The study observed limitations in work, movement, leisure and home activities, quality of life below the median and worse for the physical and emotional domains. Sleep was very impaired, followed by partial difficulty with appetite and sexual activity. Although they had anxious and depressive symptoms, most participants were moderately satisfied with their treatment.

CONCLUSION: Chronic pain has a very significant impact on quality of life, impairing and limiting daily activities more intensely in individuals with anxious and depressive symptoms.

Keywords: Anxiety, Chronic pain, Depression, Quality of life.

RESUMO

JUSTIFICATIVA E OBJETIVOS: Dor crônica acarreta incapacidade funcional e social, impactando emocionalmente os indivíduos. O objetivo deste estudo foi descrever os principais comprometimentos das atividades de vida diária, sintomas ansiosos e depressivos e qualidade de vida em pacientes com dor crônica.

MÉTODOS: Estudo transversal com pacientes de ambulatório de dor crônica. Análise das variáveis clínicas e sociodemográficas, assim como das atividades de vida diária. Avaliação de dor, de sintomas ansiosos e depressivos pela *Hospital Anxiety and Depression Scale*, de qualidade de vida pelo questionário *Medical Outcomes Study 36 - Item Short Form Health Survey* e a análise dos dados no programa estatístico SPSS.

RESULTADOS: Foi evidenciada limitação para o trabalho, movimento, lazer e atividade domiciliar, qualidade de vida abaixo da mediana e pior para os domínios aspectos físicos e emocionais. O sono foi muito comprometido, seguido de dificuldade parcial para apetite e atividade sexual. Embora apresentassem sintomas ansiosos e depressivos, a maioria dos participantes estavam moderadamente satisfeitos com o tratamento.

CONCLUSÃO: A dor crônica impacta de forma muito significativa na qualidade de vida, comprometendo e limitando as atividades diárias de modo mais intenso nos portadores de sintomas ansiosos e depressivos.

Descritores: Ansiedade, Depressão, Dor crônica, Qualidade de vida.

INTRODUCTION

Pain is a very prevalent symptom in most diseases. It can also become a specific syndrome¹⁻³ when it exists as a single condition. Approximately 80% of the global population is regularly seeking health care with complaints about pain⁴. Chronic pain (CP), besides being a major illness, has an impact in functional state and return to work⁵.

In Brazil, CP is considered a public health problem because approximately 76,2% of the population present recurrent CP or that lasts for at least six months⁶. CP is a disease that arises from a somatosensory system dysfunction which provokes important multifactorial changes specially when associated with depressive symptoms and may heavily interfere in an individual's quality of life (QoL)⁷.

Studies have reported the prevalence of psychological disorders in association with CP, including depression, which is present in most patients with CP much more frequently than in the general

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population⁸⁻¹². Anxiety is also present in most people with CP compared to those without this clinical condition¹³.

CP affects the personal and professional life of patients, worsening QoL due to physical disability, interference with work and family leisure time, social withdrawal, and psychological suffering, making these relationships complex and difficult to understand¹⁴.

The present study aimed to describe the main impairments in activities of daily living, anxious and depressive symptoms, and QoL of patients with CP.

METHODS

A cross-sectional study including 164 patients with CP seen at the Pain Outpatient Clinic of the Federal University of Bahia (UFB). Data collection was performed by one physician, two psychologists and two medical students from the last years of their undergraduate studies, after appropriate training to ensure greater agreement between the answers. Patients of both genders and ages between 18 and 80 years old were included. Individuals with difficulty in comprehending the objectives of the study, who did not complete the protocol and patients with cancer pain were excluded.

The sociodemographic and clinical data questionnaire was used, consisting of questions about the social and demographic characterization of individuals, as well as information about pain and its repercussions. Pain was assessed by the visual numeric scale (VNS), which consists of a line graduated from zero to 10, where zero represents no pain and 10 the worst imaginable pain¹⁵. The values obtained were classified as follows: zero = no pain; 1, 2 and 3 = mild pain; 4, 5 and 6 = moderate pain; 7, 8 and 9 = severe pain; and 10 = unbearable pain. The Hospital Anxiety and Depression Scale (HADS) was also used. The HADS has 14 questions, seven for anxiety and seven for depression, with the cut-off points of eight for anxiety and nine for depression¹⁶. Finally, quality of life was assessed by the Medical Outcomes Study 36 - Item Short Form Health Survey (SF-36), a generic instrument that evaluates the following dimensions: Functional Capacity (ability to take care of oneself and perform activities of daily living); Physical Aspects (impact of physical health when performing activities); Pain (level of pain when performing daily activities); General Health Status (how the individual perceives his/her health); Vitality (physical vigor); Social Aspects (impact of physical conditions on social life); Emotional Aspects (interference of emotional state on daily activities) and Mental Health (interference of mood state on life). To analyze the eight dimensions of the scale, scores from zero (most impaired) to 100 (no impairment) were used¹⁷.

Individuals signed the Free and Informed Consent Term (FICT) before being included in the research, obeying the *Diretrizes e Normas Regulamentadoras de Pesquisa Envolvendo Seres Humanos* (Guidelines and Regulatory Standards for Research Involving Human Beings), according to Resolution No. 466/12 of December 12, 2012, of the *Conselho Nacional de Saúde - Ministério da Saúde* (National Health Council - Ministry of Health - AN-VISA, 2004).

The project was approved by the Research Ethics Committee, with CAAE number 49909615.8.0000.0049 and opinion number 1.446.343.

Statistical analysis

The SPSS statistical software version 17.0 was used for data analysis and tabulation. Quantitative variables were expressed as means and standard deviation. Categorical variables were expressed as simple, absolute, and relative frequencies. The VNS and SF-36 variables were considered ordinal variables (scores) and presented as median and interquartile range. Values of $p < 0.05$ were considered statistically significant.

RESULTS

The mean age was 50 years old, 89.6% were female, with a higher prevalence of patients who were religious, had been through high school, and were unemployed (63.4%).

The most prevalent clinical diagnosis was related to degenerative diseases (68.9%), such as low back pain, arthrosis, arthritis, herniated disc, radiculopathy, among others. Pain intensity ranged from moderate to intense. Analgesics (93.3%), followed by antidepressants (70.7%), were the most used drugs. Other treatments used were physical activity (41.5), anesthetic blocks (39.6), physical therapy (34.8), and acupuncture (34.8). Most individuals reported improvement with treatment.

Regarding the limitations related to daily activities, partial difficulties were found in movement, leisure, and home activities. A higher frequency of total limitation was found in the item related to work (Table 1).

Table 1. Daily limitations of patients with chronic pain

Limitations	n (%)
Movement	
Total	77 (47)
Partial	83 (51)
No limitation	4 (2.4)
Work	
Total	121 (74)
Partial	36 (22)
No limitation	7 (4.3)
Leisure	
Total	66 (40)
Partial	86 (53)
No limitation	12 (7.3)
Home activity	
Total	61 (37)
Partial	93 (57)
No limitation	10 (6.1)

Regarding the impairments of daily activities, the following were observed: significant sleeping difficulty, partial difficulty regarding appetite and sexual activity, moderate difficulty with self-esteem and personal satisfaction. There was no impairment of personal hygiene. Anxious and depressive symptoms were present in most of the evaluated individuals (Tables 2 and 3).

Tabela 2. Impairment of patients' activities

Impairment	n (%)
Sleep	
Total	77 (47)
Partial	79 (48)
No impairment	8 (5)
Appetite	
Total	38 (23)
Partial	74 (45)
No impairment	52 (32)
Sexual activity	
Total	60 (37)
Partial	73 (45)
No impairment	31 (19)
Personal hygiene	
Total	8 (5)
Partial	58 (35)
No impairment	98 (60)
Self-esteem	
Bad	28 (17)
Poor	13 (8)
Moderate	88 (53)
Good	32 (20)
Very good	3 (2)
Personal satisfaction	
Not at all satisfied	9 (5,5)
Poorly satisfied	32 (20)
Moderately satisfied	77 (47)
Well satisfied	36 (22)
Very satisfied	10 (6)
Anxious symptoms	125 (76)
Depressive symptoms	97 (59)

Table 3. Assessment of the chronic pain patients' Quality of Life

SF36 Domains	Results
Functional capacity	25 (15 – 40)
Physical aspects	0 (0 – 25)
Pain	22 (12 – 35)
General health status	35 (25 – 50)
Vitality	30 (15 – 45)
Social aspects	38 (25 – 52)
Emotional aspects	12 (0 – 67)
Mental health	40 (27 – 63)

*Data expressed as median and interquartile range.

DISCUSSION

Results have shown that most patients with chronic pain are female, such as other studies^{18,19}. The reason is that women have a lower threshold and less tolerance to pain²⁰, besides anatomical and functional characteristics such as smaller stature, lower muscle and bone mass index, weaker joints, and greater hormonal variations in relation to men, contributing to a greater mechanical overload and, consequently, making the occurrence of pain more frequent²¹.

The intensity of moderate and severe pain observed is in accordance with the literature, because high scores of continuous pain associated with comorbidities that directly affect QoL are observed in reference centers, generating a significant socioeconomic impact and, consequently, an increase in the concern of public health managers²².

In the present study, most individuals were religious, as found in the study²³, which detected that most patients with complaints of severe pain have some religion, mainly Catholic and Evangelical. There are studies that indicate that religiosity helps when dealing with pain, increasing the threshold, because the religious practice activates the prefrontal cerebral cortex, in addition to increasing the levels of neurotransmitters such as serotonin, GABA and dopamine, all directly involved with the pathophysiology of pain²⁴.

The study identified that most of the individuals were unemployed. This is since the sample was obtained in a reference center for the treatment of pain and, as absence from work activities is often part of the illness process, unemployment is a late consequence. A study²⁵ evidenced the therapeutic path of workers with CP, starting with self-medication, submission to work risks, search for emergency care units, and, finally, withdrawal from work activities.

As for clinical diagnosis, the highest prevalence was related to degenerative diseases. Among these, low back pain is the most frequent and, when associated with psychosocial conditions and the work environment, it becomes one of the main causes of absenteeism, becoming a substantial factor of impact on economic and social costs^{26,27}.

Analgesics were the most used drugs, followed by antidepressants. Most pain conditions involve many different aspects and the use of analgesics as a single drug may not be adequate to relieve CP. In some situations, the association of analgesics with two or more drugs may result in synergistic effects and provide greater efficacy for pain relief. Antidepressants are also important in the therapeutic strategy^{27,28}.

Other treatments performed were physical activity, anesthetic blocks, physical therapy, and acupuncture. Physical activity and physical therapy are key components in rehabilitation from the biopsychosocial point of view in individuals with CP. Exercise contributes to pain reduction and improves physical function. When this activity is performed at a high level, it results in a benefit in QoL and emotional well-being²⁹.

Acupuncture, in turn, is part of the *Política Nacional de Práticas Integrativas e Complementares* (National Policy of Integrative and Complementary Practices – PNPIC) from the Brazilian public health care (SUS – *Serviço Único de Saúde*), besides being recommended by the WHO and by the consensus of the United States National Institute of Health as an effective practice, performed isolated or as an adjuvant, in several health comorbidities, including degenerative diseases that frequently cause chronic pain, such as fibromyalgia and osteoarthritis³⁰.

Evaluating the response for the best therapeutic approach may have a relationship with the patient's expectations regarding the treatment they have been going through. Researchers corroborate this when pointing out that patients with CP in general

who undergo numerous pharmacological or non-pharmacological interventions for pain control need to maintain a good therapeutic alliance and have their own beliefs about their treatment. This causes expectations to vary over the years of illness, influencing responses. In the chronic pain scenario, the goal is to increase QoL and alleviate suffering, contrary to the logic of curing pain, therefore, the patient's expectations can change and differ from the expectations created by the health care team during the entire process³¹.

The present study noted that CP patients have a low QoL compared to the Brazilian population in general in all domains, and the worst scores were for physical and emotional aspects. Study³², applying the same questionnaire in more than 12 thousand Brazilians from all regions of Brazil, evidenced that the value is generally lower when compared to countries such as the United States, Canada, Great Britain, and Australia. The values of these two domains have an expressively higher average when compared to the values found in patients with pain.

The relative work limitations for the individual who suffers from CP are very intense. This is related to the disability and diminished productivity when performing activities, resulting in loss in general well-being and impairing the movement dynamic for daily activities, altering mood, leisure, sleep, and QoL, in addition to negatively interfering in interpersonal relationships³³.

Individuals often report a negative self-perception when interacting socially, with frustration and shame when performing their daily activities. A qualitative study³⁴ in patients with CP showed that they felt misunderstood and with no social support, and many associated this feeling with the absence of evident clinical signs of the disease. This generates suffering and loss of social identity, leading to more difficulty or even impossibility to perform their social role, impairing not only affective relationships, but also sexual activity, and may lower mood, appetite, and sleep patterns. Regarding symptoms of anxiety, the study³⁵ reported that anxiety associated with pain may justify a specific treatment for anxiety because this condition is a potential vulnerability which may increase sensitivity to the disease and fear of pain, impacting the treatment efficacy. Authors³⁶ found that pain, when associated with anxiety and depression, is more disabling and results in a worse QoL compared to patients with pain alone.

According to the study³⁷, the losses most involved with CP in the medium term were sleep problems, work absenteeism, relationship problems, and increased risk of accidents. In the long term, the following were observed: worsening of sleep disturbances with job loss, sequelae from accidents, rupture of relationships, and the appearance or worsening of health problems. This association between sleep disorders, its negative consequences and CP is already well established in the literature³⁸.

The main limitation of the present study is related to the timing of the diagnosis, since the study was performed in a single evaluation, which does not allow evaluating the presence of other overlaid disorders, thus the necessity of a larger follow-up. The sample characteristics, heterogeneity of pain etiology and sociodemographic data did not allow analyzing all the variables included in the study. On the other hand, the fact that it was carried out in a reference center can be a positive predictive fac-

tor, because it minimizes eventual biases of diagnostic error and therapeutic approach of the studied pathologies.

Future research should focus on long follow-up studies with the objective of monitoring the response to the indicated treatment and its effective results in pain intensity and in the response of the individual's QoL scores, as well as active and careful evaluation by the health team in order to understand and value the individual's symptoms, which goes far beyond a complaint, as well as to understand his or her history and the sufferings inherent to his or her process of illness.

CONCLUSION

Patients suffering from CP present low scores in items related to QoL and the presence of anxious and depressive symptoms impacts the clinical scenario, generating many limitations in daily activities.

AUTHORS' CONTRIBUTIONS

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Data Collection, Methodology, Writing - Preparation of the original

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