

EVALUACIÓN DE LAS DIFERENCIAS DE GÉNERO EN LAS ESTRATEGIAS DE AFRONTAMIENTO DEL DOLOR LUMBAR

Sergio Fernando Zavarize*, Solange Muglia Wechsler
Pontificia Universidade Católica de Campinas, Brazil.

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Resumen

El dolor lumbar puede ser visto como un gran problema de salud pública. Las diferencias de género son importantes factores que influyen en los síntomas y en las respuestas del comportamiento. El objetivo de este estudio fue investigar las diferencias de género en los comportamientos de dolor y en el manejo del dolor lumbar crónico. La muestra estuvo conformada por 158 participantes (66,5% mujeres), con edades entre los 30 y 88 años que fueron diagnosticados con artrosis lumbar. Los instrumentos utilizados fueron: la Escala Visual Analógica, el Cuestionario de Calidad de Vida y un cuestionario para evaluar las actividades de ocio y distracción del dolor. Los resultados del MANOVA demostraron que las mujeres presentaron mayor percepción del dolor que los hombres. También fue posible observar frecuencias más altas de actividades sociales en las mujeres, así como correlaciones significativas entre las actividades sociales y los dominios psicológicos, sociales y medio ambientales. En conclusión, las mujeres presentan un mayor número de estrategias de afrontamiento para el dolor, lo cual puede influir positivamente en su calidad de vida.

Palabras clave: dolor, dolor lumbar, género, optimismo, afrontamiento.

ASSESSMENT OF GENDER DIFFERENCES IN COPING STRATEGIES FOR LOW BACK PAIN

Abstract

Low-back pain is considered a serious public health problem. Gender differences are important factors that influence symptoms and behavioral responses. This research aimed to investigate gender differences in pain behaviors and pain management of chronic low back pain. The sample consisted of 158 participants (66,5% female), aged 30-88 who were diagnosed with Lumbar Osteoarthritis. The instruments used were the Visual Analogue Scale, the Quality of Life Questionnaire and a questionnaire to assess leisure and distraction activities from pain. Results of MANOVA showed that women have significant greater pain perception than men. Higher frequencies of social activities were also observed for women as well as significant correlations between social activities and psychological, social and environmental domains. In conclusion, women presented a greater number of coping strategies for pain than men, which probably tend to have a positive influence in their life quality.

Key words: pain, low back pain, gender, optimism, coping.

* Rua Padre José, 396 - Mogi Mirim - SP - Brasil - CEP 13.800-170. Teléfono fijo: 51-19-38624180. Correo electrónico: sergio.fernando.zavarize@gmail.com.

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AValiação DAS DIFERENÇAS DE GêNERO NAS ESTRATÉGIAS DE ENFRENTAMENTO DA DOR LOMBAR

Resumo

A dor lombar pode ser vista como um grande problema de saúde pública. As diferenças de gênero são importantes fatores que influenciam nos sintomas e nas respostas do comportamento. O objetivo deste estudo foi pesquisar as diferenças de gênero nos comportamentos de dor e na gestão da dor lombar crônica. A amostra foi conformada por 158 participantes (66,5% mulheres), com idade entre 30 e 88 anos, que foram diagnosticadas com artrose lombar. Os instrumentos utilizados foram: a Escala Visual Analógica, o Questionário de Qualidade de Vida e um questionário para avaliar as atividades de lazer e distração da dor. Os resultados do MANOVA demonstraram que as mulheres apresentaram maior percepção da dor do que os homens. Também foi possível observar frequências mais altas de atividades sociais nas mulheres, bem como correlações significativas entre as atividades sociais e os domínios psicológicos, sociais e meio ambientais. Em conclusão, as mulheres apresentaram um maior número de estratégias de enfrentamento para a dor, o que pode influenciar positivamente em sua qualidade de vida.

Palavras-chave: dor, dor lombar crônica, otimismo, enfrentamento.

INTRODUCTION

According to the International Association for the Study of Pain (IASP), pain is defined as an unpleasant sensory and emotional experience associated with actual or potential injury described in terms of such damage (Ferreira et al., 2015; Kreling, Cruz, & Pimenta, 2006). From a clinical point of view, there are two types of pain, acute and chronic. Acute pain has a physiological character, caused by bodily injury, traumatic disorders, burns, infections and inflammatory processes, among others. It has an alert and defense function contributing to the preservation of life. It is considered chronic pain when it lasts more than six months, or extends beyond the usual recovery period expected for the triggering cause of pain (Treede et al., 2015). It deserves greater attention from health professionals given its negative influence on the individual's daily routine, which is associated with chronic disease processes (Martelli & Zavarize, 2014).

Pain is always perceived or evaluated subjectively and each individual feels and experiences it according to their previous experiences. Whether acute or chronic, pain can induce the individual to manifest several symptoms such as fatigue, decreased concentration, irregular sleep or insomnia, irritability, and social problems in the performance of their professional duties (Castro et al., 2011).

Low back pain, or more specifically lumbago, can be defined as the presence of pain in the lumbar area of the spine, in the region that extends from the last rib to the buttock crease (Grabois, 2005). Types of low back pain can be classified according to their duration: acute back pain has a sudden onset and less than six weeks duration; while sub-acute back pain lasts 6-12 weeks; and chronic low back pain lasts for a period longer than 12 weeks (Pires & Samulski, 2006).

Due to the high incidence in the general population, low back pain, also named lumbago, is an important public health problem and affects significantly the quality of life (Silva, Fassa & Valle, 2004). This pain constitutes a major cause of absence from work, in addition to bringing disabilities to the working population. In the United States, it is the second leading cause of demand for medical care in chronic diseases and appears as one of the most common reasons for disability retirement (Andrade, Araújo, & Vilar, 2005; Briganó & Macedo, 2005; Coenen et al., 2013).

There can be many causes of low back pain and these include degenerative, inflammatory and neoplastic diseases; congenital abnormalities, muscle weakness, arthritis and degeneration of the intervertebral discs, among others (Silva et al., 2004). However, chronic low back pain is rarely the result of specific diseases, but derives from a set of causes, which include physical and socio-demographic factors (gender, age, income and education), behavioral factors (smoking and low physical activity), as well as factors related to daily and occupational activities (heavy physical work, improper posture, repetitive movements), obesity and certain psychological conditions such as depression, among others (Ocarino, et al., 2009).

Pain is perceived subjectively (Campbell, Clauw, & Keefe, 2003); in addition to biological factors that influence the perception of pain, there are other important aspects such as social support and coping strategies that become essential in the patient's way of dealing with pain (Marques, Stefanello, Mendonça & Furlanetto, 2013). Therefore, negative emotions such as depression and anxiety correlate with worsening of the individual's pain perception and the consequent decline of their quality of life (Mason, Mathias & Skevington, 2008). According to the World Health Organization, quality of life is understood as the individual's

perception about life in the context of culture, values' system, or even expectations, standards and concerns regarding their objectives (WHOQOL Group, 1995).

Intensity and duration of pain, functional disability and depressive symptoms associated with low back pain have a strong impact on the quality of life. As the duration of pain increases, the indexes of quality of life tend to decline (Almeida, Braga, Lotufo Neto & Pimenta, 2013; Mason, Skevington & Osborn 2009). On the other hand, acceptance of pain is a factor that may decrease the negative impact thereof (Mason et al., 2008). According to these authors, acceptance of pain contributes to increasing adherence to treatment, improvement on the level of independence and involvement in various activities.

Chronic low back pain can bring a decrease in functional capacity and, consequently, a poor quality of life (Stefane, Santos, Marinovic & Hortense, 2013). This information becomes more relevant in patients with somatic and psychological comorbidity and in patients with higher perception of chronic pain. These signs of depression and anxiety should be further scrutinized, as they are important factors to influence the general condition of patients with chronic low back pain (Marques et al., 2013). Thus, associations between functional disability and the physical domain are presented as a determining factor in reducing quality of life (Klemenc Ketis, 2011; Stefane, et al., 2013; Zavarize & Wechsler, 2012).

According to Kohl and Glombiewski (2013) acceptance is a strategy expected to increase pain tolerance, while distraction should lead to lower pain intensity. Therefore, some measures such as proper adherence to various types of treatment and attitudes that lead to distraction of the symptoms can result in relief and pain management, as well as in better coping and a more favorable prognosis (Zavarize & Wechsler, 2012; Ferreira, Cruz, Silveira & Reis, 2015).

In order to prevent the individual from surrendering to the numerous disorders caused by pain, there is the need to generate attitudes of perseverance, capacity for recovery, resilience or coping activities. Resilient persons are those who demonstrate good adaptation strategies when facing risk or adversity (Koller & Lisboa, 2007; Souza & Cervený, 2006). Resilience can be understood as the individual's competence to maintain their subjective well-being, recover properly and even be successful when facing adverse situations (Couto, 2010); it also plays an important role in coping with pain and adopting positive attitudes towards it. This term is used with the intention of identifying how to deal with certain stressful, internal or external demands, assessed by the individual as being beyond their capacity (Nunes, 2011; Souza & Cervený, 2006; Sousa, Landeiro,

Pires & Santos, 2011). In the case of chronic low back pain, coping is a response to the situation of adversity and stress, and the goal is to create ways to achieve a sense of personal control over the problem and its behavioral alternatives in order to improve the quality of life and well-being. Therefore, it depends on the individual repertoire and is typically related to pain experiences (Ravagnani, Domingos, & Miyazaki, 2007).

It should be noted that optimistic attitudes have an important contribution in the perception of pain (Compton & Hoffman, 2012). Since long ago, scientific literature describes the harmful effects of negative emotions on the health of individuals (Salovey, Rothman, Detweiler & Steward, 2000). Feelings such as sadness, anger and anguish influence people's well-being and health. For almost twenty years, positive psychology has transferred the concepts and implications of positive emotions and feelings to various aspects of human life, including health (Lee Duckworth, Steen & Seligman, 2005). These emotions include optimism, faith, hope, trust in yourself and others. Healthy social relationships also favor these positive feelings and when they predominate, they influence the physiology of the organism, increase and improve attention, creativity, attitudes of resilience, affect immune system and consequently reduce pain (Cohn & Fredrickson, 2009; Salovey et al., 2000). Positive psychology interventions are not just efficacious but have significant value in people's real lives over time (Cohn & Fredrickson, 2010).

The social role of each gender and the type of work done daily, directly influence the problems in the lumbar spine. These factors, associated with the degree of manifestation of pain, its real damage and the duration of symptoms may affect prognosis. With aging populations, the absolute number of people with low back pain is likely to increase substantially over the coming decades. In addition, pain can also be influenced by cultural and social issues, which allow women to express or manifest it differently than men. For women, there is a tendency to focus on the emotional aspects of pain, while men tend to focus primarily on their physical sensations (Kreling et al., 2006). The duration and intensity of pain tend to be higher for women and distressful experiences have an influence on this perception. Cognitive and social factors appear to partly explain some sex-related differences. Consequently, past individual history may be influential in female pain responses (Racine et al., 2012). Therefore, gender should be considered as one of the factors that significantly influence this set of causes, interfering on the behavioral symptoms and in various types of treatment responses (Rollman, Abdel-Shaheed, Gillespie & Jones, 2004).

According to Bingefors and Isacson (2004), quality of life differs by gender and type of pain. In their research on this topic, men were most affected by headache and women by psychological variables. Pain conditions were associated with lower socioeconomic status and lifestyle factors, but there were differences between genders. Education and unemployment were significant only for men, while economic difficulties, part-time work and being married were associated with pain among women. Thus, factors associated with pain conditions were unevenly distributed between men and women, which clearly shows the particularity of each according to gender, quality of life and ways of relating to pain (Dellaroza, Pimenta & Matsuo, 2007; Fillingim King, Ribeiro-Dasilva, Rahim-Williams & Riley III, 2009; LessaII, 2009).

Considering the importance of assessing the various aspects related to disorders in low back pain, the objective of this research was to investigate about gender differences in behaviors and coping strategies when experiencing pain. In addition, it was also possible to assess the quality of life of individuals with low back pain.

METHOD

Participants

The group studied in this research was characterized by low back pain associated with the clinical diagnosis of osteoarthritis, a major cause of pain in the sample, which consisted of 158 participants (aged between 30 and 88 years). These individuals were patients with chronic low back pain who had been selected by a medical diagnosis of Lumbar Osteoarthritis and were being treated in five clinics specializing in pain therapy (three private clinics and two public ones), located in cities of São Paulo state (Brazil). Women searched physical therapy clinics for pain management in greater numbers, corresponding to 66.5% of the sample, compared to 33.5% of men. The majority of the sample consisted of married persons, with middle to low income and high school education. The occupational activities of participants were not categorized in this research.

Sample selection was based on the criteria that participants presented clinical diagnosis of lumbar osteoarthritis and symptoms for longer than twelve weeks. Individuals with low back pain due to pregnancy or associate conditions such as postoperative, herniated discs, spine tumors and neurological problems were excluded. The total number of exclusions was eleven.

Instruments

Visual Analogue Scale (VAS) (Bottega & Fontana, 2010). This is an instrument to assess the perception of pain

intensity and consists of a ruler that on the left end-point indicates “no pain” and on the right one indicates “worst possible pain”. Values range from zero to ten and the patient is instructed to self-assess their pain by marking the point of the scale according to the intensity of it (Bryce et al., 2007). Internal consistency cannot be calculated because the measure consists of only one item, but scales with single items, like VAS, are valid and extremely sensitive to changes in patient status (Tate, Forchheimer, Karana-Zebari, Chiodo, & Kendall Thomas, 2013).

World Health Organization Life Quality Assessment - WHOQOL-Bref. This is an important instrument for clinical use, widely applied internationally and adapted to Brazil. The psychometric properties of the WHOQOL-bref meet all the criteria of internal consistency, discriminant validity, concurrent validity, content validity and test-retest reliability (Fleck et al., 2000; Skevington, & McCrate, 2012). This instrument consists of 26 questions in Likert scale format, presenting two questions of general quality of life and the remaining 24 representing four domains: physical, psychological, social relationships and environmental. The scores of quality of life of the WHOQOL-Bref have a value from zero to 100, where the highest value for each domain represents better quality of life. The physical domain refers to pain and discomfort, energy, fatigue, sleep and rest. The psychological domain refers to positive feelings, negative feelings, thinking, learning, memory, concentration, self-esteem and appearance (body image). The social domain indicates personal relationships, social support and sexual activity. The environmental domain refers to physical security, home environment, financial situation, health care and opportunities for acquiring new knowledge and skills, recreation and leisure activities, and adequacy of physical environment and transportation facilities (Cruz, Polanczyk, Camey, Hoffmann, & Fleck, 2011; Fleck et al., 2000; Skevington, & McCrate, 2012).

Questionnaire on leisure and distraction activities. This instrument was developed by the authors exclusively for this research, with the purpose of improving the survey data with the population studied. Therefore, it has not gone through a validation process. It is made up of four questions related to the frequency of leisure and distraction activities, which are intended to divert the mind, forget or lessen the pain perception (examples: watching TV, reading, going to the movies, visiting their children or friends, and making crafts, among others). The questions used in the instrument were: *What do you do in your spare time or weekends as a hobby? On which conditions do you feel you have less pain? On which conditions do you feel your pain gets worse? What strategies do you use to “alleviate” or “forget” the pain?*

Procedure

This study was approved by the Ethics Committee and participants previously signed the Informed Consent Statement. Tests were completed by the participants under individual guidance and monitoring. This meeting took place at the first consultation to guarantee that participants were not taking any pain medications or participating in any kind of treatment.

To investigate gender differences on pain perception and on quality of life the Multivariate Analysis of Variance (MANOVA) was used to compare the differences in pain perception between genders and between the domains of quality of life and pain perception. Relationships between the domains of quality of life and leisure and distraction activities were compared by Spearman's correlation coefficient.

RESULTS

This section presents the results of multivariate analysis for pain between genders. Table 1 shows the results of the

perception of pain and quality of life according to genders. Table 2 shows the frequency of leisure activities and distractions, and Table 3 indicates the correlation between leisure activities and distractions and domains of quality of life, in order to analyze and compare the association between genders.

All participants presented clinical diagnosis of lumbar osteoarthritis with symptoms existing for longer than twelve weeks. Data were collected prior to the start of treatment with medications and physical therapy.

Therefore, to verify if these differences were significant, the multivariate analysis was performed and as it can be observed there was a significant difference in pain perception between genders. Women presented higher pain perception than men, with $F = 6.933$; $** p \leq .01$. In relation to the domains of quality of life, results were not significant between genders.

Table 1 shows the means and standard deviation in the domains of quality of life and pain perception according to genders.

Table 1.

Mean and standard deviation in the areas for pain perception and quality of life by gender

	Women		Men	
	M	SD	M	SD
VAS - Visual analogue scale	7,42	2,09	6,40	2,64
Domain 1 - Physical	19,09	5,13	20,53	5,19
Domain 2 - Psychological	19,60	4,40	20,83	3,72
Domain 3 - Social Relationships	10,36	2,59	10,70	2,00
Domain 4 - Environmental	24,96	5,85	24,75	4,50

Table 1 shows higher means for pain perception in women, but in relation to the domains of quality of life, results were very similar between genders.

Table 2 presents the frequency of performed leisure and distraction activities.

Table 2.

Percentage of sample in leisure and distraction activities between genders

ACTIVITIES	WOMEN		MEN	
	N	%	N	%
Social	105	72.4	53	50.9
Physical	105	14.3	53	20.8
Intellectuals	105	51.4	53	37.7
Family	105	37.1	53	26.4
Art	105	23.8	53	1.9
Religion	105	16.2	53	13.2
Domestics	105	23.8	53	18.9

Women had a higher individual average than men. Also, Table 2 presents the participants' coping strategies and the leisure and distraction activities to deal with pain. Leisure activities include situations such as watching TV, going out, reading, going to the movies, and visiting their children or friends. Activities for pain distraction include walking, reading, holding conversations, and doing crafts, among

others. In total, women presented 251 kinds of leisure and distraction activities, against 90 in men. Differences in results are 29.17% higher for women. Spearman's correlation was performed to analyze the association among the domains of quality of life and leisure and distraction activities used by participants to cope with chronic low back pain according to gender. Results are shown in Table 3.

Table 3.

Spearman correlation among leisure and distractions activities and the domains quality of life by gender

		Domain 1	Domain 2	Domain 3	Domain 4	Social	Physical	Intellectual	Family	Art	Religion	Domestics	
Women	Domain 1	-	.654**	.410**	.478**	.106	.175	.170	.026	.035	-.117	.089	
	Domain 2	.654**	-	.491**	.543**	.204*	.131	.065	.059	-.009	-.113	-.059	
	Domain 3	.410**	.491**	-	.381**	.226*	-.005	-.083	.057	.134	-.060	-.069	
	Domain 4	.478**	.543**	.381**	-	.234*	.075	.063	.160	.057	-.202*	.107	
	Social	.106	.204*	.226*	.234*	-	.118	.098	.001	-.047	-.146	-.001	
	Physical	.175	.131	-.005	.075	.118	-	-.070	-.206*	-.087	-.055	-.050	
	Intellectuals	.170	.065	-.083	.063	.098	-.070	-	-.008	.133	-.173	.024	
	Family	.026	.059	.057	.160	.001	-.206*	-.008	-	.102	.008	-.007	
	Art	.035	-.009	.134	.057	-.047	-.087	.133	.102	-	.026	.168	
	Religion	-.117	-.113	-.060	-.202*	-.146	-.055	-.173	.008	.026	-	-.129	
	Domestics	.089	-.059	-.069	.107	-.001	-.050	.024	-.007	.168	-.129	-	
	Men	Domain 1	-	.569**	.308*	.675**	.137	-.034	.007	.023	.118	.093	-.103
		Domain 2	.569**	-	.465**	.548**	.055	-.019	.058	.108	.182	-.030	-.098
Domain 3		.308*	.465**	-	.243	.033	-.060	-.009	.062	.115	-.011	-.063	
Domain 4		.675**	.548**	.243	-	.073	-.021	-.030	.161	-.032	-.089	-.090	
Social		.137	.055	.033	.073	-	-.027	.116	-.330*	-.119	-.199	.052	
Physical		-.034	-.019	-.060	-.021	-.027	-	.147	-.059	-.067	-.172	-.076	
Intellectuals		.007	.058	-.009	-.030	.116	.147	-	-.129	-.094	-.126	-.084	
Family		.023	.108	.062	.161	-.330*	-.059	-.129	-	-.079	.063	-.239	
Art		.118	.182	.115	-.032	-.119	-.067	-.094	-.079	-	-.049	-.058	
Religion		.093	-.030	-.011	-.089	-.199	-.172	-.126	.063	-.049	-	.006	
Domestics		-.103	-.098	-.063	-.090	.052	-.076	-.084	-.239	-.058	.006	-	

Note: * $p \leq .05$, ** $p \leq .01$. Domain 1 refers to Physical aspects; Domain 2 refers to the Psychological aspects; Domain 3 refers to Social Relationships; Domain 4 refers to Environmental aspects.

Table 3 indicates the correlations between leisure and distraction activities and the domains of the instrument on quality of life - WHOQOL BREF to analyze and compare their association with gender. It is important to note that domain 1 refers to the physical aspects of the construct; domain 2, to the psychological ones; domain 3, to the social relations, and domain 4, to aspects of the environment related to quality of life. Results showed significant correlations between social activities and the psychological, social and environmental domains, respectively, in women.

DISCUSSION

Socioeconomic issues are important risk factors for low back pain and disability (Katz, 2006, Sterud & Tynes, 2013). Although prevalence of pain is linked to the socioeconomic position, little is known about its influence on disability over the life course (Lacey, Belcher, & Croft, 2013).

Some limitations of this study such as not having carried out an analysis of socioeconomic status and occupation need to be considered. In addition to these factors, it is important to explore the causes of recurrent pain, failure in previous

therapeutic management and the degree of impact on the functionality of individuals (Balagué, Mannion, Pellisé, & Cedraschi, 2012; Ferreira et al., 2011; Rodarte, Asmus, de Magalhães Câmara, & Meyer, 2012).

Chronic pain affects people who suffer it, since due to its permanent and / or recurrent characteristics, generates long lasting, residual disability, continued dependence on drugs, and perception that the problem seems incurable, degenerative and irreversible. The main changes observed in chronic illness are of physical, social and psychological nature, as evidenced by alterations in lifestyle, disability, need for health care, adherence to continuous treatment, adaptation and coping, change in body image, emotional exhaustion, stigma, depression, musculoskeletal, circulatory, respiratory and digestive disorders and physical dependence (Lima et al., 2014).

The results about differences between chronic pain and gender reported by other epidemiological surveys on general pain confirmed the findings of this study, which showed greater frequency and intensity of pain for women (Dellaroza et al., 2007; Fillingim King et al., 2009; Kreling et al., 2006; LessaII, 2009). Indeed, according to the research by Barros,

Cesar, Carandina and Dalla Torre (2006) the prevalence of chronic diseases in Brazil is higher for women.

In a survey conducted by Fernandes, Jácome and Lima (2012) as to the contents of gender role expectations and with regard to perceptions and sensitivity to pain, women assess themselves as sensitive to pain in the same manner they assess men as equally sensitive too. However, men are regarded as being less sensitive to pain than women. These assessments are reflected partly in the individual perceptions of pain sensitivity.

Certainly, the implications of chronic pain can affect the quality of life, as it comprehends dimensions of subjectivity, multidimensionality and bipolarity of each individual (Zavarize & Wechsler, 2012). Regardless of the fact that women have presented higher rates of pain and have sought treatment in greater numbers, the results presented in this study showed no significant differences in perception of quality of life between genders. Probably this is so because women, more than men, use leisure and distraction strategies, as well as social activities, to face chronic pain. Ripar, Evangelista and Paula (2010) confirm that life experiences influence the social group and the individual perception of adversity.

Emotions, previous experiences and values can influence the perception of pain, and conditions such as depression, anxiety and stress associated with change in muscle tone and hormonal factors, result in the escalation of painful conditions (Pereira et al., 2006; Zavarize & Wechsler, 2012). Thus, relationships between people, emotions and positive attitudes, influence resilience, what appears to be more favorable for women (Zautra, Johnson & Davis, 2005). Diversity of social contacts and activities involving groups of people tend to foster positive emotions, leading to an improved well-being and quality of life (Cohn & Fredrickson, 2009; Santana, Corradini, & Carneiro, 2011).

Participants in this study presented several strategies for coping that influenced their quality of life. They performed various activities to deal with the problem such as watching TV, going out, reading, going to the movies, visiting children or friends, conversing, making crafts, among others. An important finding of this research is that women use strategies to deal with pain more frequently than men. Various activities involving social contact and, therefore, support for the individual who suffers back pain, as well as adequate and healthy social relationships may promote positive coping, increasing the resilience of these people (Evers, Kraaimaat, Geenen, Jacobs & Bijlsma, 2003; Koleck, Mazaux, Rasclé & Bruchon-Schweitzer, 2006).

Significant associations were found between social activities presented by women and the psychological, social

and environmental domains of the quality of life construct, which shows the important influence of these activities on the well-being of individuals with chronic low back pain. Therefore, leisure and distraction are important coping activities that have a positive character and can contribute to improve quality of life and wellness. An important factor in coping is the sense of optimism and confidence that can overcome obstacles (Cohn & Fredrickson, 2009; Cohn & Fredrickson, 2010; Salovey et al., 2000).

In conclusion, women presented higher rates in the perception of pain. In cases of osteoarthritis, it is generally advised by medical services to include some additional element in the physical activity, and women seem to adhere better to these recommendations. The practice of activities carried out by participants and the attitude of coping with pain expressed more frequently by women than by men, had a positive influence on the results. Therefore, women in this research demonstrated to be better prepared to deal with chronic low back pain than men. Future studies should complement the observed gaps, analyzing the factors not included in this research.

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