

# CLASSIFICATION OF LOW BACK PAIN INTO SUBGROUPS FOR DIAGNOSTIC AND THERAPEUTIC CLARITY

CLASSIFICAÇÃO DA LOMBALGIA EM SUBGRUPOS PARA CLAREZA DIAGNÓSTICA E TERAPÊUTICA

CLASIFICACIÓN DE LA LUMBALGIA EN SUBGRUPOS PARA CLARIDAD DIAGNOSTICA Y TERAPÉUTICA

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## ABSTRACT

**Objective:** To establish a classification in subgroups with symptoms and functionality involving volunteers with nonspecific chronic low back pain for better clarity of functional and therapeutic diagnostic definitions. **Methods:** Observational, quantitative, cross-sectional study with population of 62 university students between 18 and 30 years of age, with a mean age of 21.40 ( $\pm$  2.40) years, presenting nonspecific lumbar pain for more than three months. Three questionnaires were used for the division into subgroups: STarT Back Screening, the Oswestry Disability Index, and FABQ-Brasil, the VAS evaluation, orthopedic tests: Lasègue's, Slump test, de Sèze test, Valsalva maneuver, and evaluation of the pain threshold of the right and left iliocostal lumbar muscles. **Results:** All the volunteers included in the study had chronic back pain. Most of them (50%) had normal body mass index, 54.8% were sedentary, and of those who were physically active, 14.5% did body building. The Slump test (35.5%) proved to be more reliable than Lasègue's test (21%). In the evaluation, the volunteers reported moderate pain intensity (72.6%) and the mean pressure pain threshold was 6.37 kgf and 6.14 kgf for the right and left iliocostal muscles, respectively. In the questionnaires, 85.5% had a low-risk score, that is, a good prognosis for pain treatment, and 91.9% had minimum disability. The largest treatment hypothesis group was stabilization (29.0%). **Conclusion:** The method of treatment subgroup classification is a guide towards better semiological perspectives and the definition of the clinically preferred physiotherapeutic treatment for each case. **Level of Evidence III; Diagnostic study.**

**Keywords:** Low back pain; Chronic pain; Pain Threshold; Treatment; Classification.

## RESUMO

**Objetivo:** Estabelecer uma classificação em subgrupos com sintomatologia e funcionalidade, envolvendo voluntárias com lombalgia crônica inespecífica, para melhor clareza das definições diagnósticas funcionais e terapêuticas. **Métodos:** Estudo observatório, quantitativo, transversal, com população de 62 estudantes universitárias, entre 18 e 30 anos, com média de idade 21,40 ( $\pm$ 2,40) anos, apresentando dor lombar inespecífica há mais de três meses. Foram utilizados três questionários para a divisão dos subgrupos: STarT Back Screening, Índice de Incapacidade Oswestry e FABQ-Brasil, avaliação de EVA, testes ortopédicos de Lasègue, Slump Test, Sinais das Pontas, Manobra de Valsalva e avaliação do limiar de dor no músculo iliocostal lombar direito e esquerdo. **Resultados:** Todas as voluntárias incluídas no estudo apresentam lombalgia crônica. A maioria com 50% de índice de massa corporal normal, sendo que 54,8% são sedentárias e, das que praticam atividade física, 14,5% fazem musculação. O Slump Test (35,5%) mostrou-se mais confiável do que o teste de Lasègue (21%). Na avaliação, as voluntárias relataram intensidade de dor moderada (72,6%) e com média do limiar da dor à pressão sobre o músculo iliocostal lombar direito de 6,37 kgf e esquerdo de 6,14 kgf. Nos questionários, 85,5% mostrou-se com pontuação de baixo risco, ou seja, um bom prognóstico para o tratamento da dor e 91,9% com incapacidade mínima. O maior grupo de hipótese de tratamento é a estabilização (29,0%). **Conclusão:** O método de tratamento da classificação de subgrupos norteia para melhores perspectivas semiológicas e de definição do tratamento fisioterapêutico de predileção clínica para cada caso. **Nível de Evidência III; Estudo diagnóstico.**

**Descritores:** Dor lombar; Dor crônica; Limiar da dor; Tratamento; Classificação.

## RESUMEN

**Objetivo:** Establecer una clasificación en subgrupos con sintomatología y funcionalidad, involucrando a voluntarias con lumbalgia crónica inespecífica para mejor claridad de las definiciones diagnósticas funcionales y terapéuticas. **Métodos:** Estudio observatorio, cuantitativo, transversal, con población de 62 estudiantes universitarias, entre 18 y 30 años, con promedio de edad de 21,40 ( $\pm$  2,40) años, presentando dolor lumbar inespecífico desde hace más de tres meses. Fueron utilizados tres cuestionarios para la subdivisión de los subgrupos: STarT Back Screening, Índice de Incapacidad Oswestry y FABQ-Brasil, evaluación de Eva, pruebas ortopédicas de Lasègue, Slump Test, señales de las puntas, maniobra de Valsalva y evaluación del umbral de dolor en el músculo iliocostal derecho e izquierdo. **Resultados:** Todas las voluntarias incluídas en el estudio presentan lumbalgia crónica. La mayoría con 50% de índice de masa de cuerpo normal, siendo que 54,8%

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son sedentarias y, de las que practican actividad física, 14,5% hace musculación. El Slump Test (35,5%) se mostró más confiable que el Test de Lasègue (21%). En la evaluación, las voluntarias relataron intensidad de dolor moderada (72,6%) y con el promedio del umbral de dolor a la presión sobre el músculo iliocostal lumbar derecho de 6,37 kgf e izquierdo de 6,14 kgf. En los cuestionarios, 85,5% se mostró con puntuación de bajo riesgo, o sea, un buen pronóstico para el tratamiento de dolor y 91,9% con incapacidad mínima. El mayor grupo de hipótesis de tratamiento es la estabilización (29,0%). Conclusión: El método de tratamiento de la clasificación de subgrupos nortea para mejores perspectivas semiológicas y de definición del tratamiento fisioterapéutico de predilección clínica para cada caso. **Nivel de Evidencia III; Estudio diagnóstico.**

**Descriptor:** Dolor de la región lumbar; Dolor crónico; Umbral del dolor; Tratamiento; Clasificación.

## INTRODUCTION

Low back pain is generally defined as pain, muscle tension, or stiffness located in the back below the ribs and above the lower gluteal folds, with or without leg pain.<sup>1</sup> The clinical diagnosis of low back pain has been the major cause of musculoskeletal problems in society and can be described as acute, subacute, transient, recurrent, or chronic.<sup>2</sup> The acute phase of low back pain is generally defined as lasting up to one month, the subacute phase as lasting between two and three months, and the chronic phase as more than three months of episodes of low back pain.<sup>2,3</sup> Chronic low back pain is a disorder commonly encountered in clinical practice and 75-85% of people have experienced some form of chronic low back pain, which generates high socioeconomic costs. Chronic low back pain is divided into three types of mechanisms: specific spinal pathology, irradiated pain, and nonspecific chronic pain, which is statistically the most common of the three types of low back pain.<sup>3</sup>

Nonspecific chronic low back pain is characterized by pain in the lumbar region without defined causes, such as reduced disc space, nerve root compression, bone or joint damage, scoliosis, or marked lordosis that could lead to back pain.<sup>2</sup>

The prevalence of pain appears to vary according to factors like sex, age, education, and occupation. The incidence is higher in workers whose jobs entail heavy physical exertion, such as lifting of weights, repetitive movements, and frequent static postures. Obese biotypes are predisposed to nonspecific chronic low back pain when compared to other biotypes and advancing age is also associated with an increase in the incidence of low back pain. The prevalence of nonspecific low back pain is higher among females than males.<sup>2,4</sup> Women have anatomical characteristics that facilitate this condition, such as smaller stature, a smaller amount of muscle and bone mass, a greater amount of fat mass, and more fragile joints.<sup>3</sup>

Diagnosis aims to combine the patient's clinical presentation with the most effective treatment approach. The diagnosis is difficult because it is a pathology of undefined cause, without any pathological mechanism defined, since factors related to spinal lesions and nerve root compressions are excluded. One way to diagnose low back pain is through physical therapy screening questionnaires that assess patients based on the nature, the onset, and progression of their symptoms, movements, or specific positions that improve or worsen symptoms, and functional tests. In recent studies, Delitto et al. proposed a classification system based on subgroups that uses historical information and physical examination to place the patient into one of four separate treatment groups.<sup>2</sup>

This diagnostic classification can help generate hypotheses about which types of treatment are most likely to target the pain source, with the goal of separating patients with similar pain profiles into groups to reduce inefficient treatment variability.<sup>5</sup>

The subgroup-based classification is divided into four groups. If in the examination, an increase in radiating pain in the lumbar extension is reported or the lower limb elevation test is positive, lumbar traction is usually indicated. If there is no radiating pain, the evaluator verifies if the pain is influenced by specific movements of the lumbar spine and if it is alleviated by the opposite movement. The group with this presentation of symptoms is classified as specific movements. In the manipulation classification subgroup, the low back pain symptom is of recent onset and there is no distal knee pain. Recurrent low back pains in younger groups are manifestations of the stabilization subgroup.<sup>6</sup>

Algometers have been used to measure the sensitivity of

muscles and other soft tissues. The pressure pain threshold can be used to evaluate the development and decline of experimentally induced muscle sensitivity.<sup>7</sup>

The objective of this study was to establish a classification into groups by symptomatology and functionality involving volunteers with nonspecific chronic low back pain to improve the clarity of functional and therapeutic diagnostic definitions.

## METHODS

This is an observational, cross-sectional, quantitative study. The study group consisted of 62 women between 18 and 30 years of age, enrolled in the Physical Therapy course of study at the Universidade do Extremo Sul Catarinense-UNESC. The volunteers from the course who had nonspecific chronic low back pain were included in the study, while those with low back pain with a specific clinical diagnosis involving the spine were excluded.

The study took place at the Biomechanical Laboratory of the Clínicas Integradas da UNESC. The study was approved by the UNESC Institutional Review Board (REC) on November 27, 2017 as opinion number 2.399.861.

Prior to the commencement of the evaluations, all participants provided the written Informed Consent Form (ICF) to participate in the study and they completed an identification questionnaire. They also completed three questionnaires: the STarT Back Screening Tool (SBST), consisting of nine items, four of which are related to pain, dysfunction, and comorbidities and five of which are related to the psychosocial part, such as discomfort, fear, anxiety, and depression;<sup>8</sup> the Oswestry Disability Index 2.0 (ODI), composed of ten questions, the first assessing pain and the other nine, the result of pain on daily living activities (DLAs);<sup>9</sup> and the Fear Avoidance Beliefs questionnaire in the version validated for Brazil (FABQ-Brasil), consisting of sixteen questions, the first five of which referring to beliefs about physical activity and the other 11 questions related to occupational beliefs.<sup>10</sup>

The physical therapy assessment consisted of evaluating the ability or inability to perform spinal movements using the following techniques: the de Sèze test, performed standing; the Lasègue test, applied with the volunteer in the supine position on a stretcher; the Slump test, conducted with the individual sitting on a stretcher; the Valsalva Maneuver, sitting in a chair; the Visual Analog Scale (VAS) for pain, using a horizontal line to visualize and indicate the score on the scale; and the Pressure Pain Threshold (PPT) to evaluate the lumbar iliocostalis muscle using a Kratos model DDK electronic dynamometer-type pressure algometer with measurements up to 100 kgf, applied with the individual in the prone position and instructed to push a button that blocks the algometer screen when the sensation of pressure turns into pain.

The data collected in the study were analyzed using IBM SPSS Statistics Version 21 software. The quantitative data were described as means and standard deviations. The qualitative data were described as frequencies and percentages.

## RESULTS

The sample was composed of 62 young women in the 18 to 30 years of age range, students in the UNESC physical therapy course. The study analyzed sociodemographic data and the subgroup classification (Table 1).

The entire sample had nonspecific chronic low back pain. In Table 2, cervical pain stands out as being associated with low back pain.

The study analyzed the movements of the lumbar spine, highlighting the extension of the spine, with apparent pain reported for most of the population (62.9%). Next, apparent pain upon right lateral inclination of the spine was reported for 37.1%. There were no cases of inability to perform the movement (Table 3).

The study analyzed orthopedic tests for the characteristics of the classification subgroups. The Slump test was identified as having higher positivity than the Lasègue test and in the testing of this sample it was shown to be more sensitive, with 35.5% for the Slump test and 21% for the Lasègue test (Table 4).

**Table 1.** Distribution of Demographic and Anthropomorphic Data.

Variables	n (%) n = 62
Age*	21.40 ± 2.40
Height (cm) *	162.97 ± 5.35
Weight (kg) *	60.46 ± 10.58
BMI*	22.69 ± 3.33
<b>BMI**</b>	
Underweight	16 (25.8)
Normal weight	31 (50.0)
Overweight	13 (21.0)
Obese	2 (3.2)
<b>Occupation</b>	
Student	32 (51.6)
Intern	15 (24.2)
Salesperson	5 (8.1)
Secretary	5 (8.1)
Health professional	2 (3.2)
Athlete	1 (1.6)
Seamstress	1 (1.6)
Manicurist	1 (1.6)
<b>Practice of Physical Activity</b>	
No	34 (54.8)
Yes	28 (45.2)
<b>Modalities of Physical Activity</b>	
Body building	9 (14.5)
Functional training	7 (11.3)
Pilates	6 (9.7)
Walking	4 (6.5)
Sports	2 (3.2)

Source: Study data (2018). Key: \*Values expressed as mean and standard deviation. \*\* Distribution of Body Mass Index classes.

**Table 2.** Distribution of the Presence of Pain in the Body Segments and Physical Therapy Treatment Performed.

Variables	n (%) n = 62
<b>Sacral Pain</b>	
No	56 (90.3)
Yes	6 (9.7)
Lumbar Pain	62 (100.0)
<b>Back Pain</b>	
No	56 (90.3)
Yes	6 (9.7)
<b>Cervical Pain</b>	
No	43 (69.4)
Yes	19 (30.6)
<b>Physical Therapy Treatment Performed</b>	
No	56 (91.8)
Yes	5 (8.2)
Not informed	1

Source: Study Data (2018).

The VAS score, which evaluates pain intensity, indicated moderate intensity in most of the sample (72.6%). In 85.5% of the sample, the SBST classification showed low risk scores for poor prognosis in low back treatment related to psychosocial factors, that is, good prognosis, higher positivity, reliability, and success in primary low back pain treatments. The variables of the FABQ-Brasil questionnaire scored < 30 points in most cases and the higher the score, the greater the fear and beliefs regarding the grievance of low back pain in relation to work and to physical activity. The ODI questionnaire results showed that 91.9% of the sample had minimal disability, indicating that low back pain is not synonymous with disability (Table 5).

**Table 3.** Distribution of Movement-dependent Pain Data.

Types of Spinal Movement	n (%) n = 62
<b>Flexion Movement</b>	
Performs without pain	41 (66.1)
Performs with apparent pain	21 (33.9)
<b>Extension Movement</b>	
Performs without pain	23 (37.1)
Performs with apparent pain	39 (62.9)
<b>Right Lateral Rotation Movement</b>	
Performs without pain	47 (75.8)
Performs with apparent pain	15 (24.2)
<b>Left Lateral Rotation Movement</b>	
Performs without pain	48 (77.4)
Performs with apparent pain	14 (22.6)
<b>Right Lateral Inclination Movement</b>	
Performs without pain	39 (62.9)
Performs with apparent pain	23 (37.1)
<b>Left Lateral Inclination Movement</b>	
Performs without pain	41 (66.1)
Performs with apparent pain	21 (33.9)

Source: Study Data (2018).

**Table 4.** Distribution of the Special Test Findings.

Tests	n (%) n = 62
<b>Lasègue Test RLL<sup>1</sup></b>	
Negative	49 (79.0)
Positive	13 (21.0)
<b>Lasègue Test LLL<sup>1</sup></b>	
Negative	54 (87.1)
Positive	8 (12.9)
<b>Slump Test RLL<sup>1</sup></b>	
Negative	40 (64.5)
Positive	22 (35.5)
<b>Slump Test LLL<sup>2</sup></b>	
Negative	40 (64.5)
Positive	22 (35.5)
<b>de Sèze Test – Right Plantar flexion (S1)</b>	
Negative	59 (95.2)
Positive	3 (4.8)
<b>de Sèze Test – Left Plantar flexion (S1)</b>	
Negative	61 (98.4)
Positive	1 (1.6)
<b>de Sèze Test – Right Dorsal flexion (L5)</b>	
Negative	51 (82.3)
Positive	11 (17.7)
<b>de Sèze Test – Left Dorsal flexion (L5)</b>	
Negative	59 (95.2)
Positive	3 (4.8)
<b>Valsalva Maneuver</b>	
Negative	40 (64.5)
Positive	22 (35.5)

Source: Study Data (2018). Key: <sup>1</sup>Right lower limb. <sup>2</sup>Left lower limb.

**Table 5.** Distribution of Data Involving Pain Intensity, Algometry and the Classifications Used.

Variables	n (%) n = 62
<b>Visual Analog Scale</b>	
Mild 0-2	12 (19.4)
Moderate 3-7	45 (72.6)
Intense 8-10	5 (8.1)
<b>Pain Pressure Threshold (PPT)</b>	
Algometry of the Right Lumbar Iliocostal <sup>†</sup>	6.37 ± 2.77
Algometry of the Left Lumbar Iliocostal <sup>†</sup>	6.14 ± 2.66
<b>STarT Back Classification</b>	
Low risk	53 (85.5)
Medium risk	9 (14.5)
<b>Total FABQ-Brasil<sup>1</sup> Score</b>	
0	6 (9.7)
1-10	12 (19.4)
11-20	18 (29.0)
21-30	17 (27.4)
31-40	5 (8.1)
41-50	3 (4.8)
51-60	1 (1.6)
<b>Oswestry Questionnaire 2.0 Classification</b>	
Minimal disability	57 (91.9)
Moderate disability	5 (8.1)
<b>Subgroup Classification</b>	
Manipulation	5 (8.1)
Stabilization	18 (29.0)
Specific Extension Movements	13 (21.0)
Specific Flexion Movements	10 (16.1)
Specific Lateral Inclination Movements	5 (8.1)
Traction	11 (17.7)

Source: Study Data (2018). Key: <sup>†</sup>Brazilian version of the Fear Avoidance Beliefs Questionnaire. \*Values expressed as mean and standard deviation.

## DISCUSSION

The literature indicates that almost 27 million Brazilian adults over the age of 18 report spinal problems. This condition predominantly affects females due to their anatomical and functional conditions.<sup>7,11</sup> Biomechanical and psychosocial parameters play an important role in the origin of low back pain in both the young and the elderly. It is very important to study the young population, because the treatment of chronic and nonspecific low back pain during this stage of life can be crucial for the prevention of recurrences.<sup>11,12</sup> Thus, this study targeted an audience of young adult women with a mean age of 21 years, similar lifestyles, and with nonspecific chronic low back pain.

Lumbar spine disorders are generally prevalent among workers with lumbar overload, resulting from improper posture, repetitive work, and psychological risk factors, including stress, distress, anxiety, depression, and job dissatisfaction. Most of the study population's only occupation is academic life, the rest of sample stating that they are interns or have some other occupational activity. Low back pain is common among undergraduate students, many of whom may have persistent symptoms. This condition is related to the need to remain seated for prolonged periods, which can be a significant predictor of the appearance and persistence of low back pain.<sup>13</sup>

This study observed that the Body Mass Index (BMI) is not associated with low back pain, since most of the sample (75.8%) had a normal BMI, followed by below normal BMI. Contrary to our findings, Furtado et al., in their evaluation of young adults with nonspecific

low back pain, noted that a below normal BMI is a risk factor associated with low back pain.<sup>12</sup> Another study involving a population of 20-year-olds observed that obesity increases the risk of developing low back pain and that an obesity BMI was related to low back pain in a later phase of life.<sup>14</sup> Excess body weight, therefore, had a detrimental effect on the performance of daily living activities (DLAs) in individuals with low back pain.<sup>15</sup>

In our study, 54.8% of the individuals were identified as sedentary. Among those who practiced physical activity, body building was the most common at 14.5%. The practice of light to moderate physical activity reduces the risk of low back pain. But if people are lifting weights using machines, as in the case of body building, they acquire strength in their major muscle groups but may not be developing strength in the main spine-stabilizing muscles to support the weight they are handling. This adds overload to the spine and can lead to pain and identifiable injuries. People who lift weights regularly may confuse pain experienced the day after a weightlifting session with low back pain. Light to moderate physical activity has beneficial characteristics for the prevention of low back pain and other morbidities.<sup>12,16</sup> Thus, it is clear that the occurrence of low back pain is related to the nature and intensity of the physical activities performed, making it difficult to specifically designate which activities potentially cause low back pain. However, it can be assumed that intense activities with excessive loads pose a higher risk.

Among our findings, 30.6% of the study sample presented cervical pain associated with low back pain. Among the possibly related factors, depending on the type of activity performed, are the vicious postures that can impair the cervical stabilizer muscle groups. In a study conducted by Stenberg et al., comparing reports of cervical pain from women and men, the authors noted that the women reported more stress and pain.<sup>17</sup> The prevalence of cervical pain among workers worldwide is higher in women, and they seek care for cervical and shoulder pain more often.<sup>18,19</sup>

Nonspecific chronic low back pain was of moderate intensity in 72.6% of the sample according to the VAS, which is a one-dimensional pain evaluation strategy, but widely used in clinical studies due to its quick and easy-to-understand approach. High VAS scores indicate the potentiality of acute exacerbations. There is a wide range of pain intensities from individual to individual with this scale. It is based on self-reported communications of subjective experiences, involving cognitive processes and consequently, cannot be compared directly and out of context with the score of another subject.<sup>20</sup>

Extension of the lumbar spine was the movement that produced the most pain for the sample volunteers, affecting 62.9%. The right lateral inclination movement was referred to as painful by 37.1%. In addition to the biomechanical aspects, it is important to consider that spinal movements and functions may be influenced and restricted by psychological aspects such as fear of movement (kinesophobia) or anxiety.<sup>21</sup>

In the study by Majlesi et al., conducted at an outpatient clinic in the neurosurgery department of a hospital with 75 patients with complaints suggestive of disc herniation, low back pain, and low back pain with leg pain, the Lasègue and Slump tests were applied during patient evaluation. The authors showed that the Slump test is more sensitive in patients with herniated discs, placing the sciatic nerve roots under greater tension than the Lasègue test. The Lasègue test has higher specificity and can help to identify patients who require surgery.<sup>15</sup> The Slump test showed greater positivity than the Lasègue test in the sample evaluated, being more sensitive. The positivity percentages observed in the Slump and Lasègue tests of the right limb were 35.5% and 21%, respectively.

Imamura et al. negatively correlated the Pain Pressure Threshold (PPT) with pain and function, but there are other important factors, such as affective, motivational, depressive, and especially functional, which can affect the pain threshold and require caution when interpreting the results. In the same study, Imamura et al. did not find a correlation between the VAS and the PPT in the lumbar region muscles and myofascial tissues. A study conducted by Schenk et al. reported no association between low back pain and the PPT

in the groups studied. Low back pain is not associated only with a generally heightened sensitivity of the lower back muscle and ligament tissues.<sup>22,23</sup> The study by Lima et al. showed that in patients with nonspecific chronic low back pain there is more muscle activity in the lumbar region when performing movements than in asymptomatic patients.<sup>24</sup> Among the evaluations conducted in our study, the algometry results averaged 6.37 kgf of PPT in the right lumbar iliocostal muscle and 6.14 kgf in the left. Therefore, the PPT was considered moderate.

The sample had 91.9% minimum disability, that is, the presence of low back pain did not signify an inability to perform daily living activities, considering that pain is only one of the multiple factors involved in functional capacity. In a study that investigated the relationship between the presence of pain and disability in coal miners in the city of Treviso/SC, functionality scores as evaluated by the ODI questionnaire reflected 97.5% minimum disability, with only one case of moderate disability. Other studies highlight the lack of a relationship between pain and the presence of lumbar disability.<sup>26,27</sup>

The stabilization subgroup accounted for 29% of cases of nonspecific chronic low back pain in this study. This subgroup was characterized by a high frequency of relapses, no restrictions on movement, and pain resulting from movement. With the high percentage of these results in the stabilization subgroup, it can be observed that although the group was made up of young adults, muscle weakness was common. We can infer that the types of activities or exercises practiced by the sample were not efficient for strengthening the muscles that are so important to stabilization of the lumbar region. This indicates the importance of professional assistance to prevent nonspecific chronic low back pain, given that this condition can be avoided.<sup>28</sup>

The specific extension movements classification subgroup was in second place at 21%, followed by the traction subgroup at 17.7%. Specific extension movements were characterized by signs and symptoms of exacerbation in flexion and lateral inclination movements of the spine. Signs and symptoms of sciatic nerve root compression were evident in the volunteers in the traction subgroup

in this study. In a study conducted in a private outpatient clinic by Oliveira et al., 21.91% of the 65 individuals were classified as the stabilization subgroup, followed by 15.38% as extension and 11.89% as traction. When the authors compared their results with other previously conducted studies, they noted that the rates of prevalence were partially similar.<sup>28</sup>

In the study by Hebert et al., the stabilization exercise method indicated the importance of restoring specific muscles, such as the transversus abdominis and lumbar multifidus, the general restoration of strength, and the resistance of the trunk muscles. Among the specific exercise groups, extension directional preference is the most common. There is a description of a clinical situation in which movement in the opposite direction can worsen the symptoms. The recommendation to use traction is focused on the presence of pain signals and sciatic nerve root compression.<sup>29</sup>

This type of subgroup approach is recommended to assist physical therapists to make decisions about therapeutic interventions in patients with nonspecific chronic low back pain. This method contributes to treatment design and provides each patient with an adapted type of approach, compatible with the symptoms and the functional status.

## CONCLUSION

Low back pain subclassification is a strategy that can facilitate proper targeting of physical therapy treatment options because it takes functional aspects into account instead of focusing too sharply on symptoms, guiding towards the therapeutic option that can be used with greater potential for certain patients. Likewise, there is a need for a more in-depth study of signs and symptoms of cases in the management of low back pain, making use of tests and clinical evaluations that assess functional conditions more thoroughly.

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All authors declare no potential conflict of interest related to this article.

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**CONTRIBUTION OF THE AUTHORS:** Each author made significant individual contributions to this manuscript. JPE: writing, data collection, analysis and discussion; WCL: discussion, analysis, and review of the original article.

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