147 - EVALUATION OF THE INFLUENCE IMMEDIATE OF LUMBOSACRAL MOBILIZATION AND MANIPULATION TECHNIQUES ON STATIC POSTURAL ACTIVITY AND PLANTAR SURFACE CONTACT IN INDIVIDUALS WITH CHRONIC LOW BACK PAIN

KARINE CARMINATI DOMINGOS
ANDRÉIA CRISTINA TRAVASSOS DA COSTA
EDUARDO ALEXANDRE LOTH
JOSÉ FERNANDO BAUMGARTNER
MACIEL RICARDO MASSAO ABICO
JOSÉ MOHAMUD VILAGRA
Universidade Estadual do Oeste do Paraná - UNIOESTE, Cascavel-PR, Brasil
karinec.domingos@gmail.com

INTRODUCTION

Low back pain is one of the most painful disorders that affect humans, affecting approximately 90% of individuals at some point in their lives, making it the most frequent cause of disability and morbidity. Low back pain can be classified into acute, subacute and chronic, with about 10% of affected children will present its chronic form, may be more prevalent in some populations and professionals (BRAZIL et al., 2004; RIBERTO et al., 2011). This algia may arise as a result of congenital, degenerative, inflammatory, infectious, and tumor mechano-posture, the latter being responsible for most cases of painful spine (ANDRADE, ARAÚJO, VILAR, 2005).

The postures trigger a breakdown structural lines unbalancing forces necessary for maintaining good posture (painless), both static and dynamic (BIENFAIT, 1997). These lines are from both forces the spine as lower limb. The spine is the axis of the body support and protection of the nervous system (spinal cord), with ascending and descending lines. Already legs originate upward forces. And the center of concentration of these forces is the pelvic girdle, which is a transition structure consists of a linkage formed by the spine, sacrum, iliac and lower limbs. These are interactions between the joints of the pelvis and its influences on other structures, characterizing the biomechanical body static (KAPANDJI, 2000).

So one can say that is good through structural alignment that provides adequate transmission of forces (upward and downward), which will reflect the distribution of the load on the soles of the feet and body balance static and dynamic. One way to evaluate the activity and static postural plantar surface contact is through baropodometry. Which is a technique used posturography log in diagnosis and evaluation of plantar pressure, both in static position, as a movement, or gait, which records the points of pressure exerted by the feet on the ground (SCHMIDT; BANKOFF; ZAMAI; BARROS, 2003). This technique also allows stabilometric assessment, which evaluates the static postural activity, verifying the anterior-posterior and lateral body and each individual's foot on the apparatus (FERREIRA et al., 2010).

Among the various ways to treat mechanical disorders, one of the most efficient is through manual techniques, including soft tissue manipulation, massage, manual traction, joint manipulation, joint mobilization and (DI FABIO, 1992). Among these, joint manipulation (grade 5) is widely used to treat patients with low back pain. The technique is based on joint movements of low amplitude and high speed (thrust) that will mobilize the joint and break the cycle pain-spasm-pain, which results in frames of immobility and consequent adherence joint (KIRKALDY-WILLIS; CASSIDY, 1985).

Because the onset of back pain one great incidence, and techniques articular present beneficial effects in reducing the pain and the correction of biomechanical dysfunction, which can lead to postural imbalances, making up more studies in this area. Since there is little research on the actual effects of these techniques on the body, especially on the postural system (FREITAS, 2010). The present study aims to evaluate the immediate influence of the technique of manipulation and joint mobilization on static postural activity and plantar surface contact of individuals with chronic low back pain.

METHODOLOGY

This research is characterized as a clinical cross-sectional, prospective character. It was held at the physiotherapy clinic at the State University of Western Paraná (UNIOESTE) in the period from March to July 2012, with the approval of the Ethics in Research Involving Humans UNIOESTE by Opinion No. 1456/2011.

The sample was initially composed of 31 individuals, both male and female, with the same students enrolled in courses UNIOESTE. All were initially evaluated for inclusion in the criteria for inclusion and exclusion. Once these have been addressed, and science of the study, the term of consent was signed.

Inclusion criteria were: age over 18 years, reported low back pain without radiation to the lower limbs, for over three months, and Hendler Test with a score greater than 18 (MAGEE, 2010).

The inclusion criteria for this study were adopted by the difference in the length of the lower limbs; history of fracture in the lower limbs, and for pregnant women. Exclusion criteria are joint dysfunction in only one segment (one lumbar or sacroiliac only), neurological deficits, cauda equina syndrome and lumbar arthrodesis, lumbosacral and sacroiliac.

The study comprised five stages of evaluation. In the first stage the participants were only evaluated at baseline criteria for inclusion and exclusion by an appraiser. In the second phase the subjects were assessed through Baropodômetro Am3 coupled to a platform with 4800 active sensors in 120 cm. Which was evaluated with the contact area of the plantar surface (given in cm2). Besides the static postural activity, through the displacement of the center of pressure (COP) of the body (given in cm2), with 95% of selected points (FERREIRA et al., 2010; ANDRADE et al., 2011).

The evaluation was applied by evaluators baropodometric previously trained to perform the test. Was performed with the participant still on the platform for 30 seconds in bipedal support, feet apart and aligned to the hip, without shoes, his mouth half-open, arms at your sides, eyes open and with eyes fixed on a point in the same height (FREITAS, 2010). The procedure was performed in twice for adaptation to the first device and the second sample true, and the two were conducted in the same manner. The assessment was administered to all participants in the same manner by the same investigator.

In the third step were applied kinesiological following functional tests: test Mitchel test, Gillet, Downing test, test thumbs upward and test palpation. Following directly to a technique of manipulation and / or joint mobilization (fourth stage).

Mitchel testing is used to check the position of the joint dysfunction in lumbar vertebrae, whether they are in flexion or extension side and which are located (BIANFET, 1997). Possible vertebral lesions may be found in length with rotation to right or left; or flexion rotation to the right or left. To remedy the dysfunction observed in this test was applied to maneuver a technique for Lumbar Roll (for extension or flexion), which is a technique that uses a pulse of low amplitude and high speed (thrust) (DI FABIO,

1992).

The Gillet test is used to check the mountings of the sacrum relative to the ilium (Magee, 2010). However it is not possible to verify this test only in its original form, in which position this joint is locked.

The Downing test is used to check the rotation of the anterior and posterior iliac through an external and internal rotation of the hip respectively (BIENFAIT, 1997). Being used to determine whether the hipbone is locked in rear, which leaves the shorter limb, or the leaving member anterior longer. The correction of these changes took place by a thrust technique for normalizing earlier or later. (RICARD; SALLÉ, 2002).

According Bienfait (1997) test of thumbs upward (also known as seated flexion test) is used to verify the sacral dysfunctions, but does not identify whether it is before or after an injury, they will be checked by palpation of the sacral sulcus. The test is used to supplement palpation test of thumbs upward, is through him that the position will be examined dysfunction, is in extension or flexion.

The possible dysfunctions found in sacral always take into consideration the position of the base block in sacral anterior or posterior. They can be bilateral, unilateral right or left and torsion axle with left or right (BIENFAIT, 1997). To correct these lesions was used to time the normalization respiratory (OLIVEIRA, 20 --).

The intervention protocol used in this study was based on the application of the technique and reassessment through kinesiological testing to verify the functional correctness of dysfunction. In cases where the first attempt at correction was not satisfactory, a further handling and / or mobilization was done for the same disorder. And yet when the dysfunction was not corrected with the volunteer followed the evaluation procedures and their data were excluded from the final analysis.

Finished the correction procedures joint participants underwent baropodometry again (fifth stage), respecting the same sequence and procedures performed at baseline, to reassess the plantar surface contact area and COP sway.

Data distribution in relation to normality as Gaus curve was checked by the Kolmogorov-Smirnov test. The analysis of anthropometric variables occurred by simple descriptive statistics and the results are presented by means of measure of central tendency and dispersion measurement. The values obtained for the evaluation and stabilometry baropodometry were analyzed by inferential statistics to compare the means by paired Student t test, with significance level of 5%. For that we used the programs Microsoft Office Excel 7.0® and GraphPad Prism 5.0®.

RESULTS

Of the 31 subjects with pain, only 26 were part of the sample, 5 were excluded for having only one type of dysfunction. Since the average age of the volunteers was 20.730 ± 1.733 (years), weight 64 ± 4.242 kg and height of 1.70 ± 0.068 cm. Regarding gender there was a predominance of women, with 20 participants, and 6 men.

As for the data stabilometry, the results showed no significant difference when compared before and after manipulation / mobilization. As can be seen in Table 2.

Table 2 - Data stabilometry in cm2.

	Before	After	α**
Mean *	1,953 ± 1,56	1,996 ± 1,86	0,165

* Average COP oscillation; ** significance of α <0.05.

In the data plantar pressure can be observed (Table 3) a significant difference when comparing the values of each leg separately (right and left) in the weight distribution on plant contact surface before and after handling / mobilization.

Table 3 - Data plantar surface contact in cm2.

	Leg right	Leg left
Mean before	86,040 ± 14.499	85,951 ± 13.829
Mean after	83,073 ± 16.511	81,913 ± 14.329
α *	0,021	0,001

* significance of α <0.05

DISCUSSION

The sample was composed of 26 students, 20 women and 6 men, with age, weight and height similar, these characteristics are found in surveys Freitas (2010) and Silva, Mattos, Oliveira (2005). In relation to sex, there was a predominance of females, equating it with the study of Silva, Fassa, Valle (2004).

In order to bring as much of the literature and make playback more reliable. The methodological procedures related baropodometry used in this study, are similar to the intervention protocols used by Bankoff, et al (2004) and Freitas (2010). Who also used bipedal support on the platform for 30 seconds, feet apart and aligned to the hip, without shoes, his mouth half-open, arms at your sides, eyes open and with eyes fixed on a point in the same time.

Regarding the techniques of manipulation and mobilization this study took into consideration that back pain can originate and lumbosacral joint biomechanical changes of the lumbar spine / pelvis could change the static postural activity, and therefore the application of the intervention in the two segments. However, studies evaluating these procedures carry through baropodometry, the treatment of dysfunctions of the segments of the spine separately. In the study by Freitas (2010) evaluated the segment, through baropodometry stabilometry and after the manipulation was the sacroiliac joint, and the influence of technical standardization of posterior iliac on the distribution of plantar pressure and body sway in 16 adults young. In the survey conducted by Silva Mattos Oliveira (2005) evaluated the segment was the thoracic spine, observing the effects of the sympathetic nervous system in the plantar weightbearing after a manual therapy technique in the dorsal column (DOG) in 06 young adults . What about cervical portion, Liao Giovanetti (2009) evaluated the plantar pressures in 20 subjects with and without pain temporomandilubar pre and post cervical manipulation.

Data stabilometry, even with a slight increase in surface oscillation of COP were not significant. Such evidences are supported in the literature, the study by Freitas (2010), it was observed that the mean area of the ellipse formed by the oscillation of the COP also showed no significant difference. In a study by Ferreira et al (2010) both classical physiotherapy as a combined method of physical therapy intervention brought no significant effects on stabilometry of individuals with chronic low back pain.

Unlike stabilometry, plantar pressure data of each foot significantly different when comparing between pre-and post-manipulation, which differs from our research study de Freitas (2010) with 16 young adults. In which we observed significant

reduction in surface contact to post-intervention standardization of posterior iliac only on the right foot. In the study conducted by Silva Mattos Oliveira (2005) in which we applied a technique in osteopathic direct backbone (DOG) was observed on the acute responses footprint in both feet, increasing the contact surface.

Taking into account the structural alignment of the body and biomechanics, adjustments caused by joint manipulation and mobilization techniques applied can change the biomechanics directly target and reset the power lines ascending and descending (BIANFET, 1997). In addition to modifying the inflow of sensory signals tissues (Pickar, 2002). From this information comes from the hypothesis that these techniques could cause small increases in static postural activity, causing the body need to readjust the equilibrium reactions. Justifying also changes in the distribution of plantar surface contact.

CONCLUSION

This study concluded that the techniques of joint mobilization and manipulation used in this study, the participants in the lumbosacral region, have influence on static postural system, being significant only in the plantar surface contact.

REFERENCES

ANDRADE, A. R. et al. Influência dos exercícios de estabilização central sobre a oscilação corporal de indivíduos com lombalgia crônica. Revista Brasileira de Fisiologia do Exercício, v. 10, n. 3, p.137-141, jul/set. 2011.

ANDRADE, S. C.; ARAÚJO, A. G. R.; VILAR, M. J. P. "Escola de Coluna": revisão histórica e sua aplicação na lombalgia crônica. Revista Brasileira de Reumatologia. v.45, n.4, p.224-228, jul./ago. 2005.

BANKOFF, A. D. P. et al. Estudo do equilíbrio corporal postural através do sistema de baropodometria eletrônica. Conexões, v. 2, n. 2, 2004.

BIENFAIT, M. Bases elementares técnicas de terapia manual e osteopatia. 4 ed. São Paulo: Summus, 1997.

BRAZIL, A. V. et al. Diagnóstico e Tratamento das Lombalgias e Lombociatalgias. Revista Brasileira Reumatologia. v. 44, n. 6, p. 419-425, nov./dez. 2004.

BRONFORT, G. et al. Effectiveness of manual therapies: the UK evidence report. Chiropractic and Osteopathy, v.18, p.3, 2010. Disponível em < http://www.chiromt.com/content/pdf/1746-1340-18-3.pdf > Acesso em 12 set 2012

DI FABIO, R. P. Efficacy of manual therapy. Physical Therapy. v.72, n.12, p. 853-864, dez.,1992.

FERREIRA, C. B. et al. Os efeitos de dois métodos de intervenção Fisioterapêutica sobre a atividade postural Estática de indivíduos com dor lombar crônica. Revista Brasileira de Ciências da Saúde, ano 8, n. 26, out/dez 2010.

FREITAS, J. P. Influência da manipulação osteopática sacroilíaca sobre a pressão plantar e oscilação corporal através do sistema de baropodometria e estabilografia. 2010. 74f. Tese (Mestrado em Engenharia Biomédica) – Instituto de Pesquisa e Desenvolvimento, Universidade do Vale do Paraíba. 2010.

KAPANDJI, A. I. Fisiologia Articular: tronco e coluna vertebral. 5 ed. São Paulo: Panamericana, 2000. 2 v.

KIRKALDY-WILLIS, W. H.; CASSIDY, J. D. Spinal manipulation in the treatment of low-back pain. Canadian Family Physician, v. 31, p. 535-540, mar.,1985.

LIAO GIOVANETTI, C.O. Estudo da pressão plantar em indivíduos com e sem dor temporomandibular antes e depois de uma intervenção fisioterapêutica manual na coluna cervical 2009. 64f. Dissertação (Mestrado em Engenharia Mecânica na área de Projetos) – Universidade Estadual Paulista, Faculdade de Engenharia de Guaratinguetá. 2009

MAGEE, D. J. Avaliação Musculoesquelética. 5 ed. São Paulo: Manole, 2010.

OLIVEIRA, A. P. Terapia manual. [20--] 1 DVD. Escola de Terapia Manual Profº André Pêgas.

PICKAR, J. G. Neurophysiological effects of spinal manipulation. The Spine Journal. v.2, p.357-371, may 2002.

RIBERTO, M.; CHIAPPETTA, L. M.; LOPES, K. A. T.; BATTISTELLA, L. R. A experiência brasileira com o core set da classificação internacional de funcionalidade, incapacidade e saúde para lombalgia. Coluna/Columna. v.10, n.2, p.121-6, 2011

RICARD, F.; SALLÉ, J-L. Tratado de osteopatia: teórico e prático. São Paulo: Robe, 2002.

SCHMIDT, A; BANKOFF, A; ZAMAI, C; BARROS, D. Estabilometria: Estudo do equilíbrio postural através da baropodometria eletrônica. Anais do Congresso Brasileiro de Ciências do Esporte: Caxambu, 2003.

SILVA, M. C.; FASSA, A. G.; VALLE, N. C. J. Dor lombar crônica em uma população adulta do sul do Brasil: prevalência e fatores associados. Cad. Saúde Pública. v.20, n.2, p.377-385, mar-abr, 2004.

SILVA, R. B. X.; MATTOS; H. M.; OLIVEIRA, C. S. Efeitos imediatos da terapia manipulativa da coluna dorsal analisado pela baropodometria. Anais do IX Encontro Latino americano de Iniciação Cientifica e V Encontro Latino Americano de Pós-Graduação – Universidade do Vale do Paraíba, 2005.

Rua Economia, 614, ap.04, Jd. Universitário,
Cascavel-PR
Email: karinec.domingos@gmail.com

EVALUATION OF THE INFLUENCE IMMEDIATE OF LUMBOSACRAL MOBILIZATION AND MANIPULATION TECHNIQUES ON STATIC POSTURAL ACTIVITY AND PLANTAR SURFACE CONTACT IN INDIVIDUALS WITH CHRONIC LOW BACK PAIN

ABSTRACT

Low back pain is one of the most painful disorders who affect humans, affecting about 90% of individuals at some point in their lives. Objective: Evaluating the influence immediate of manipulation technique and articulation mobilization on the static postural activity contact surface plant in individuals with low back pain. Methodology: The purpose of this research is related to a transversal clinical assay composed of 26 participants, of both genders, being then, students enrolled at UNIOESTE. The study was composed by five stages: first the participants were evaluated for the inclusion and exclusion criteria. In the second phase they passed through the static baropodometric evaluation before intervention. In the third stage were carried out kinesiological functional tests. Following of straight to intervention (fourth stage). And revaluation on the baropodometry post-intervention (fifth stage). The data was plotted in Microsoft Excel 7.0 Oficce ® and statistical analysis through the Kolmogorov-Smirnov and paired t test Student, with $\alpha < 0.05$. Results: Stabilometry Datas showed no significant difference ($\alpha = 0.16$) when compared before (1.95 cm2) and after (1.99 cm2) the manipulation / mobilization. Regarding the foot pressure, a significant difference was observed when comparing the values of each foot separately (right $\alpha = 0.021$; left $\alpha = 0.001$) in the distribution of weight on foot surface contact before and after manipulation / mobilization. Conclusion: Techniques of articulation mobilization and manipulation, used in this research, region of individuals with chronic low back pain, have an influence on static postural system, being significant only in the plantar surface contact.

KEY-WORDS: Low back pain; Osteopathic manipulation; Postural balance.

ÉVALUATION DE L'INFLUENCE DE LA MOBILISATION IMMÉDIATE LOMBO-SACREE ET DES TECHNIQUES DE MANIPULATION SUR L'ACTIVITÉ POSTURE STATIQUE ET CONTACT SURFACE PLANTAIRE CHEZ LES PERSONNES AYANT UNE LOMBALGIE CHRONIQUE

RÉSUMÉ

La lombalgie est l'un des troubles les plus douloureuses qui affectent les humains, qui touche environ 90% des individus à un moment donné dans leur vie. Objectif: Evaluer l'influence immédiate de la technique de manipulation et de mobilisation d'articulation sur la plante statique activité posturale surface de contact chez les personnes souffrant de douleurs au bas du dos. Méthodologie: Le but de cette recherche est liée à un test clinique transversale composée de 26 participants, des deux sexes, étant alors, les étudiants inscrits à UNIOESTE. L'étude a été composée par cinq étapes: d'abord, les participants ont été évalués selon les critères d'inclusion et d'exclusion. Dans la deuxième phase, ils traversèrent l'évaluation statique baropodométrique avant l'intervention. Dans la troisième étape ont été réalisées kinésiologiques tests fonctionnels. Les données ont été tracées dans Microsoft Excel 7.0 ® Office et l'analyse statistique par le biais de Kolmogorov-Smirnov et lié test t de Student, avec $\alpha<0,05$. Résultats: les données stabilométrie montré aucune différence significative ($\alpha = 0,16$) par rapport devant (1,95 cm2) et après (1,99 cm2) la manipulation / mobilisation. En ce qui concerne la pression du pied, une différence significative n'a été observée lorsque l'on compare les valeurs de chaque pied séparément (à droite $\alpha = 0,021$; gauche $\alpha = 0,001$) dans la répartition du poids sur la surface de contact du pied avant et après la manipulation / mobilisation. Conclusion: Les techniques de mobilisation d'articulation et de manipulation, utilisé dans cette étude, la région des personnes atteintes de lombalgie chronique, ont une influence sur le système postural statique, étant significatif que dans la surface de contact plantaire.

MOTS-CLÉS: Douleur au bas du dos, La manipulation ostéopathique, L'équilibre postural.

EVALUACIÓN DE LA INFLUENCIA DE LA MOVILIZACIÓN DE INMEDIATO LUMBOSACRA Y TÉCNICAS DE MANIPULACIÓN SOBRE LA ACTIVIDAD POSTURAL ESTÁTICA Y CONTACTO SUPERFICIE PLANTAR EN INDIVIDUOS CON DOLOR LUMBAR CRÓNICO

RESUMEN

El dolor lumbar es uno de los trastornos más dolorosos que afectan a los humanos, que afecta a alrededor del 90% de las personas en algún momento de sus vidas. Objetivo: Evaluar la influencia inmediata de la técnica de manipulación y movilización de la articulación de la planta de superficie estática postural actividad de contacto en personas con dolor de espalda baja. Metodología: El propósito de esta investigación está relacionada con un ensayo clínico transversal compuesta por 26 participantes, de ambos sexos, siendo entonces, los estudiantes matriculados en UNIOESTE. El estudio estuvo compuesto por cinco etapas: en primer lugar los participantes fueron evaluados para los criterios de inclusión y exclusión. En la segunda fase se pasa a través de la evaluación baropodometría estática antes de la intervención. En la tercera etapa se llevaron a cabo pruebas funcionales kinesiológicos. Después de derecho a la intervención (cuarta etapa). Y revalorización de la baropodometría post-intervención (quinta etapa). Los datos se representan en Microsoft Excel 7.0 Office ® y el análisis estadístico mediante la prueba de Kolmogorov-Smirnov y prueba t de Student pareada, con $\alpha <0,05$. Resultados: variables estabilometría no mostró diferencias significativas ($\alpha = 0,16$) cuando se compararon antes (1,95 cm2) y después (1,99 cm2) la manipulación / movilización. En cuanto a la presión del pie, una diferencia significativa fue observada al comparar los valores de cada pie por separado (derecha $\alpha = 0,021$; izquierda $\alpha = 0,001$) en la distribución de peso en la superficie de contacto del pie antes y después de la manipulación / movilización. Conclusión: Las técnicas de movilización articular y la manipulación, que se utiliza en esta investigación, la región de los individuos con dolor lumbar crónico, tienen una influencia sobre el sistema postural estática, sólo fueron significativas en el contacto con la superficie plantar.

PALABRAS CLAVE: Dolor de espalda baja, la manipulación osteopática, equilibrio postural.

AVALIAÇÃO DA INFLUÊNCIA IMEDIATA DE TÉCNICAS DE MANIPULAÇÃO E MOBILIZAÇÃO LOMBOSSACRAIS SOBRE A ATIVIDADE POSTURAL ESTÁTICA E SUPERFICIE PLANTAR DE CONTATO EM PORTADORES DE DOR LOMBAR CRÔNICA

RESUMO

A dor lombar é um dos distúrbios dolorosos que mais afetam o homem, atingindo aproximadamente 90% dos indivíduos em algum momento de sua vida. Objetivo: avaliar a influência imediata da técnica de manipulação e mobilização articular sobre a atividade postural estática e superfície plantar de contato de indivíduos com dor lombar crônica. Metodologia: A presente pesquisa trata-se de um ensaio clínico de corte transversal, composto por 26 indivíduos, de ambos os sexos, sendo os mesmos alunos matriculados em cursos da UNIOESTE. O estudo foi composto por cinco etapas: na primeira os participantes foram submetidos à avaliação para os critérios de inclusão e exclusão. Já na segunda etapa passaram pela avaliação baropodométrica estática pré intervenção. Na terceira etapa realizaram-se os testes cinesiologicos funcionais. Seguindo diretamente para intervenção (quarta etapa). E reavaliação na baropodometria pós-intervenção (quinta etapa). Os dados foram tabulados no programa Excel 7.0 Microsoft Oficce® e a análise estatística deu-se por meio do teste Kolmogorov-smirnov e o Teste t Student pareado, com $\alpha<0,05$. Resultados: Os dados da estabilometria, não apresentaram diferença significativa ($\alpha = 0,16$) quando comparados pré (1,95cm2) e pós (1,99cm2) manipulação/mobilização. Em relação a pressão plantar observou-se diferença significativa quando comparados os valores de cada pé separadamente (direito $\alpha =0,021$; esquerdo $\alpha =0,001$) na distribuição de peso na superfície plantar de contato pré e pós-manipulação/mobilização. Conclusão: As técnicas de manipulação e mobilização articular utilizadas nesta pesquisa, apresentam influência no sistema postural estático, sendo significativa apenas na superfície plantar de contato.

PALAVRAS CHAVES: Dor lombar; Manipulação osteopática; Equilíbrio postural.