

Review

The Contribution of Traditional Chinese Medicine in the Treatment of Neck Pain - A Comprehensive Review of the Literature.

Emma Simões Calçada^{1*}  and Liliana Sampaio dos Santos^{1,2} .

¹ ABS – Health Level, Atlântico Business School, Vila Nova de Gaia, Porto, Portugal.

² IPB - Instituto Politécnico de Bragança (Polytechnic University of Bragança), Bragança, Portugal.

* Correspondence: ema.fsc@gmail.com

Abstract

Cervicalgia, or neck pain, is a common condition that affects a significant number of the global population and is one of the leading causes of disability. There is not a single treatment for neck pain. However, the search for alternative, less invasive methods with fewer side effects has increased the interest in complementary integrative practices, such as Traditional Chinese Medicine (TCM). This study aims to understand the contribution of TCM and its techniques in the treatment of neck pain. The methodology adopted was a narrative review of the literature. The search was carried out in two databases - PubMed and ScienceDirect - and six studies published between 2018 and 2024 were selected. The results showed that acupuncture, cupping therapy, tuina (when combined with the *yijinjing* exercise) and guidance centred on *Jin Shang* effectively relieve pain, increase functionality and improve patients' quality of life. It is concluded that TCM has a positive impact on the treatment of neck pain and can be integrated into clinical practice and the design of health policies that integrate complementary approaches in the care provided to patients with neck pain.

Keywords: Cervicalgia; Treatment; Traditional Chinese Medicine.

Citation: Calçada E.S., dos Santos L.S. The Contribution of Traditional Chinese Medicine in the Treatment of Neck Pain - A Comprehensive Review of the Literature. Journal of Complementary Therapies in Health. 2025;3(2) 10.5281/zenodo.15653018

Academic Editor: Jorge Rodrigues

Received: 02 April 2025

Reviewed: 22 April 2025

Revised: 11 May 2025

Accepted: 28 May 2025

Published: 12 June 2025

Publisher's Note: IPTC stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Copyright: ©2025 by the authors. Submitted for open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

1. Background

Cervicalgia, or neck pain, can be described as a common condition that affects a significant amount of the global population and has been identified as one of the leading causes of disability¹, contributing to a lower quality of life. This condition is associated with various factors being a challenge for health professionals and patients due to its complexity, which justifies that the pathophysiology of most of its conditions is still not fully understood¹. There is not a single treatment for neck pain, which can include pharmacological therapies, physical therapies and surgical interventions. However, the search for alternative, less invasive methods with fewer side effects, especially analgesics and non-steroidal anti-inflammatory drugs², has increased the interest in complementary integrative practices, such as TCM. According to the International Association for the Study of Pain¹ (IASP), there is evidence in favour of multimodal rehabilitation programs (physical exercise, mobilization, manipulation) and psychological interventions, which improve function. The IASP also adds that for immediate treatment, acupuncture, low-power laser therapy, and the application of electromagnetic pulses can be beneficial, and the pharmacological approach has been effective in relieving pain¹.

In this scenario, TCM can be an alternative or complementary practice in the treatment of neck pain, and, as Santos *et al.*³ point out, it has been much sought after by those who want a better quality of life. For this reason, this study aims to carry out a narrative literature review that allows a comprehensive analysis of existing studies, to gather the

best and most current empirical evidence that allows us to understand the contribution of TCM in the treatment of neck pain. The relevance of this study is justified by the fact that neck pain is affecting more and more people, having an impact on public health ⁴ and by the growing interest in non-conventional therapies (NCT).

1.1. Cervicalgia

Cervicalgia is a clinical condition characterized by discomfort or pain in the cervical segment ⁵, more precisely in the posterior or posterolateral region of the neck ⁶. In some cases, the pain can be local or radiate to the upper limbs (shoulders, arms or upper back) in the respective dermatomes ⁶. Pain is a sensory and subjective phenomenon ⁷ and given the nature of the caused pain, it can vary in intensity (mild, moderate and severe), but it can also be classified according to its quality and time of inception: acute neck pain or chronic neck pain. Acute neck pain is pain that starts suddenly and lasts no longer than six weeks ⁸ and is caused by trauma, exercise, or poor posture. Chronic neck pain, on the other hand, increases gradually and lasts for more than three months ⁸ and can be caused by degenerative changes, such as cervical osteoarthritis, or psychological factors, such as anxiety and stress. When neck pain persists from six weeks to three months, it is considered sub-acute pain ⁸.

Depending on the severity factor, this clinical condition is classified into four levels ^{9,10}:

1. Neck pain without signs or symptoms of structural pathology and its interference with activities of daily living (ADLs) is nil or vestigial;
2. Neck pain without signs or symptoms of structural pathology, but interference with ADLs is already very evident;
3. Neck pain without signs or symptoms of structural pathology, but there are neurological signs of nerve compression;
4. Neck pain with signs or symptoms of structural pathology.

Neck pain can also be classified according to where the pain is: upper neck pain occurs above the C4 cervical vertebra, so the pain is felt at the level of the head; lower neck pain appears below the C4 vertebra, so the pain is felt in the scapular area; suboccipital pain is felt between the occipital line and the C2 vertebra ¹¹. Finally, this clinical condition is also differentiated by the International Classification of Functioning, Disability and Health ⁹ according to the impairment of bodily functions, i.e. neck pain with: mobility deficits; associated headaches; movement coordination deficits or radiating pain.

Neck pain is one of the most prevalent musculoskeletal conditions in the world, affecting millions of people, and around 50% of adults are affected by neck pain at some point in their lives ^{12,13}. In this regard, David *et al.*¹⁴ mention that 30% of the working population aged between 25 and 29 and 50% of individuals over 45 had one or more episodes of neck pain and stiffness. Haldeman and collaborators point out that neck pain is more prevalent in women ¹⁰. It has an impact on people's quality of life, as it reduces functionality, makes it challenging to perform ADLs and interferes with physical and mental well-being, which is why cervicalgia is currently considered one of the costliest musculoskeletal problems that alter not only the health of those affected but also their quality of life ¹⁵. Its annual prevalence is between 30 and 50% in the Western population, with consequences for health systems, but also for society, because of the financial outlay it requires: diagnosis; treatment; costs associated with a lower quality of life; and loss of work ¹⁶.

Treating neck pain requires a combination of different strategies, from physiotherapy, therapeutic exercises, relaxation techniques, pharmacological therapies ⁶ and in some cases, surgery may also be the most appropriate option. In recent years, integrative approaches such as TCM have been gaining prominence as a complementary alternative in the treatment of neck pain, namely acupuncture ^{4,6}. In fact, acupuncture has proven to be an effective non-pharmacological approach to pain treatment, being a safe, cost-effective method with low rates of side effects ¹⁷. The study by Mendonça *et al.* ¹⁷ even shows that the various acupuncture techniques effectively treat chronic pain such as neck pain.

Cervical spine and movements

The cervical spine is made up of seven cervical vertebrae (C1 to C7) and its role is to support and move the head while protecting the neural and vascular structures (spinal cord and nerves). It is the area of the spine with the most significant mobility and, at the same time, the most prone to injury¹⁸. The C1 (atlas) and C2 (axis) vertebrae make up the upper cervical spine, and, it is their articulation with the occiput that allows the individual three degrees of freedom of movement¹⁹. The C3 to C7 vertebrae make up the lower cervical spine, allowing two movements: flexion/extension and an articulated tilt-rotation movement¹⁹. Although they are different, the functions performed by each part of the cervical spine complement each other, making it possible to perform pure flexion/extension, rotation and inclination movements of the head¹⁹.

Risk factors

The causes of neck pain are very diverse, and in many cases, they are unknown¹⁹; however, they can be mechanical, inflammatory, postural or emotional. The main risk factors associated with cervicgia are mechanical and postural, characterized by local mechanical alterations, changes in the spine and muscle contractures²⁰, resulting from poor posture and, for example, the continuous use of electronic devices, which can overload the cervical muscles.

According to Geertie *et al.*²¹, the risk factors associated with neck pain are physical, psychosocial, individual risk and occupational. They point out that the literature on the subject shows an association between neck pain and aspects related to work, such as high professional and psychosocial demands, which causes stress, which, in turn, contributes to greater muscle tension; little control over work; poor interrelationship between employees in the workplace; low satisfaction, tension and conflicts at work; poor safety; duration of rest breaks considered to be short²¹. In addition, psychosocial demands can have a negative impact on muscle's wakeful state and the musculoskeletal disease response. Psychosocial factors and musculoskeletal pathologies can also mirror the relationship between physical risk factors and musculoskeletal changes²¹.

1.2. Traditional Chinese Medicine

TCM is a complex system of healing that emerged in China over 2000 years ago to promote health and treat disease²². It translates into a "body of knowledge and techniques that have developed since ancient times through the sum of the experiences and clinical observations of generations of Chinese sages and healers, presenting a physiology and pathophysiology with distinct characteristics from modern biomedicine"²³. It is considered an NCT based on an understanding of the human body and nature, aiming to re-establish the individual's energetic balance, based on their health. For this reason, the concept of health is "linked to the understanding that there is a potential for vital energy circulating in every human being, and it is by maintaining this potential, preserving it as much as possible, that health will be maintained"²³.

The principles of TCM are *Yin* and *Yang*, *Qi*, *Xue*, channels and the five movements. *Yin* and *Yang* represent the universe and the human body as a system of opposing but complementary forces, the balance between which is crucial for maintaining overall health²⁴. *Qi* (read as chi) is the vital energy that flows through the body, which nourishes and maintains harmony between organs and systems, so its balance is crucial since it is *Qi* that keeps the human being physically and mentally healthy²⁵. *Xue* is blood, the densest form of functional *Qi*, which nourishes and moistens the tissues²⁶. The channels are a system of energy channels that run through the body with specific functions: 12 main channels; 8 extraordinary channels; 12 distinct channels; 15 collateral channels; 12 tendon-muscle channels; and 12 skin zones²⁷.

Santos *et al.*⁶ point out that pain or illness can arise due to difficulties in the circulation of *Qi* and *Xue* through the channels, so this complex system aims to promote the

relationship between the vital substances (*Qi*, *Xue*, *Jing Ye* (organic liquids), *Jing* (essence) and *Shen* (spirit or mind)) the organs (*Zang* - heart, pericardium, lungs, liver, spleen and kidneys) and viscera (*Fu* - large and small intestines, bladder, gallbladder, stomach) ²⁷.

The five movements form the basis of TCM and this theory assumes that the universe is made up of the movement and transformation of these movements: wood, fire, earth, metal and water ⁶. These movements are associated with the organs and functions of the body, so an imbalance between them can lead to illness, as it is the interrelationships that apply to the pathophysiology of diseases when there is no balance and harmony ²⁸.

Diagnosis in TCM

Diagnosis in TCM is characterized by a complex and detailed process based on observation of the patient and evaluation of signs and symptoms, not using medical instruments or tests ²⁹. For this reason, TCM is a philosophical and scientific way of thinking because it does not seek to identify diseases but rather energetic imbalances that trigger symptoms. Guided by Xiang thinking, a cognitive process based on observing the body's signs and symptoms, which include processes of association, metaphor, comparison, symbolism and analogy, to assess and analyze human pathophysiology ³⁰.

Diagnosis in TCM is based on the four examinations of semiology and the eight principles of diagnosis ^{31,32}, the first corresponding to: inspection, where the professional makes a general observation of the patient, taking into account appearance, skin and hair, mood, facial expression, speech, breathing, brightness of the eyes, examination of the tongue, nail bed, state of consciousness, posture and coordination of movements ^{33,34}; auscultation and olfaction: the former is used to listen to the patient's sound, more precisely, their voice, speech, breathing, coughing, eructation, hiccups and vomiting, and the latter allows breath, excretions and secretions (sweat, mucus, faeces and urine) ³³ to be analyzed, and changes in smell can be indicative of the presence of some pathology ³⁵; palpation, an examination in which the therapist palpates the wrist, belly and other points on the body in order to assess local temperatures, responses to pressure, energy and the condition of the internal organs, particularly the presence and characteristics of tumors ³³; pulse, when assessed in detail, reveals important information about the individual's state of health, revealing possible energy imbalances and dysfunctions in the internal organs, determining its speed, depth, strength, character and range ²⁹; questionnaire, in which the patient is asked about signs and symptoms, clinical history, lifestyle and habits, complaints, treatments and/or medication ³⁵, covering 10 aspects (sensation of cold and heat, perspiration, head and body, chest, hypochondrium, epigastrium and abdomen, eyes and ears, intake and taste, sleep, excretions, gynecology and paediatrics) ³³.

Classification of cervicalgia in the light of TCM

Within the scope of TCM, neck pain is considered an integral part of Cervical Spondylopathy, recognizing that degeneration, which develops at an increasingly early age, is due to the excessive use of screens and that in the neck-type, neck pain is the only symptom and treatment is the same whether there is degeneration or not ³⁶. In this respect, Santos *et al.* ⁶ explain that the aetiology of all musculoskeletal diseases can be caused by exogenous factors that influence the body's balance - external trauma, repetitive efforts and climate changes (wind, cold and humidity) - and endogenous factors, such as emotional and diet-related factors.

From a TCM perspective, pain is caused by the stagnation of *Qi* and/or *Xue* in the channels, and can be triggered by a local or systemic etiological factor or a combination of the two ³⁷, according to *Yi Dao* - Acupuncture Center ³⁸, cervicalgia results from imbalances in the flow of *Qi* and *Xue* in the channels that run through the neck and upper back. The stagnation of *Qi* and *Xue* is one of the main factors contributing to the onset of this clinical condition, which develops when the flow of *Qi* and *Xue* in the channels is blocked ³⁸. In

the same sense, Cui *et al.*³⁹ explain that chronic neck pain accompanied by radicular symptoms is caused by the obstruction of the flow of *Qi* and *Xue* in the neck area, resulting in symptoms such as pain, numbness and a feeling of cold.

In the light of TCM, the interruption of the flow of *Qi* can lead to pain and in cervicgia, the channels most affected are those of the liver, gallbladder and bladder, which run through the cervical area³⁸. Thus, “the Liver-Gallbladder system is of primary importance in the case of the neck. Liver syndromes such as Liver *Qi* Stagnation and Liver *Yang* hyperactivity can be associated with torticollis and shoulder contracture, and the neck area is especially susceptible to Cold Wind invasion, especially when there are predisposing factors such as Kidney *Qi* Deficiency or *Qi* Stagnation due to previous injury or emotional stress”⁶. External pathogenic factors - wind, cold and dampness - also contribute to neck pain, and the TCM approach considers that these external energies can enter the body, especially when the energy defence is low, causing pain and stiffness in the neck³⁸. In addition to the above, it is also worth adding that “energy deficiency in the kidneys or liver can cause neck pain. In TCM, the kidneys govern the bones, and when there is a deficiency of *Jing* (vital essence), the bones and joints can become weak and vulnerable, resulting in pain. The liver, in turn, controls the smooth flow of *Qi* and blood; when it is stagnant, whether due to emotional stress or poor diet, circulation to the muscles and tendons of the neck is impaired, causing pain and tension”³⁸. Essentially, either individually or together, when the factors described above are present, they “can cause malnutrition of the muscles, joints, soft tissues and bones, by partially or completely blocking the circulation of *Qi* and *Xue* at a superficial or deep level, disordering the functioning of the internal organs (*Zang Fu*) through a state of imbalance in the physiological energy functions”⁶.

2. Research Methodology

The research protocol adopts a literature review methodology, specifically, a comprehensive narrative literature review. The narrative literature review is a type of qualitative literature review and has been carried out in various areas of knowledge⁴⁰. Narrative literature reviews are studies characterised by comprehensive publications aiming to describe and discuss the existing literature on a given subject, from a theoretical or contextual perspective⁴¹. This type of review does not adopt any particular methodology and does not require a specific protocol for its preparation, standing out for its flexibility⁴². Cordeiro *et al.*⁴³ refer to the narrative literature review as a traditional literature review, explaining that it “presents a more open theme; it hardly starts from a well-defined specific question, and does not require a rigid protocol for its preparation; the search for sources is not predetermined and specific, and is often less comprehensive”.

Although this is not compulsory for a narrative literature review and with a view to greater scientific rigour, in order to construct the research question, the question to be answered through the research, we used the PICO strategy, an acronym for: Patient, Intervention, Comparison and Outcome⁴². The description of its components is as follows: Patient - patients with neck pain; Intervention - traditional Chinese medicine; Comparison - western medicine; Outcome - therapeutic impact of TCM in the treatment of neck pain. This led to the following research question: What is the therapeutic impact of TCM in the treatment of neck pain?

2.1. Inclusion and exclusion criteria

For this review, selection criteria were defined for the studies to be considered, distinguishing between inclusion and exclusion criteria. The inclusion criteria were articles: published between 2014 and 2024; available in full; published in English and Portuguese; focusing on TCM in the treatment of neck pain. We chose articles published in the last 10

years because we wanted to present a review based on current evidence. The type of studies considered included randomized controlled trials, meta-analyses, systematic literature reviews and quantitative studies.

The exclusion criteria were articles: published before 2014; which are not openly available; published in languages other than those mentioned; and which focus on TCM in the treatment of other pathologies.

2.2. Explanation of the research method

To standardize the terms for the bibliographic search to be carried out in the next stage, the health descriptors were searched and the following were selected: neck pain; traditional Chinese medicine; and treatment outcome. Next, a Boolean phrase was constructed to be inserted into two databases (PubMed and ScienceDirect): ((neck pain) AND (traditional Chinese medicine)) AND (treatment outcome).

In PubMed, 101 results were obtained, and after inserting the inclusion criteria, four articles published between 2022 and 2024 were selected: Cheng *et al.* (2022)⁴⁵; Lyu *et al.* (2022)⁴⁶; Deng and Wu (2023)⁴⁷; Yu *et al.* (2024)⁴⁸. In ScienceDirect, 5214 results were obtained, and after applying the inclusion criteria, two articles were selected, both published in 2018: Yang *et al.* (2018)⁴⁹; Zhang *et al.* (2018)⁵⁰.

To achieve coherence and scientific rigor, and for a better explanation of all the stages of the bibliographic research process (data sources), the PRISMA flowchart is presented below in Figure 1.

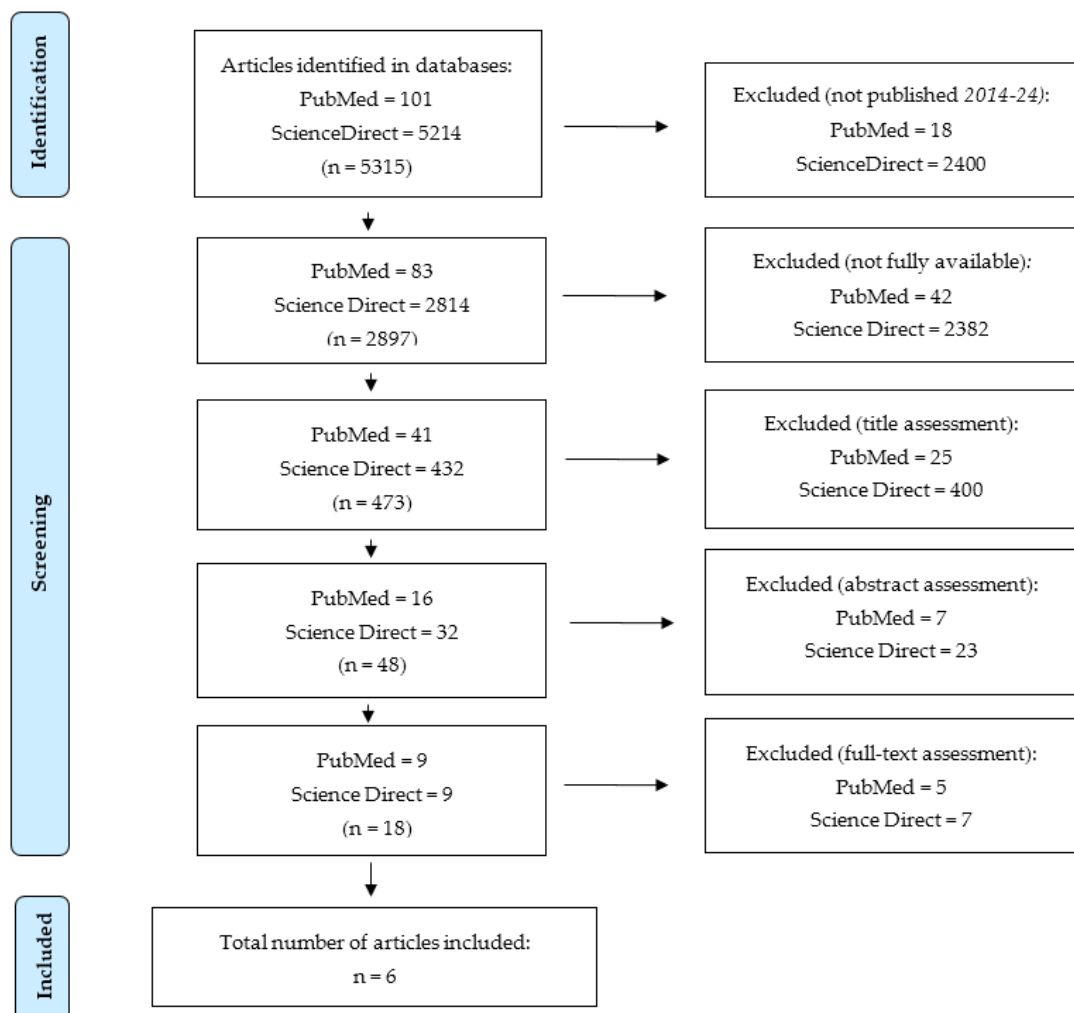


Figure 1: PRISMA flowchart

3. Results

As previously mentioned, this review includes six studies published between 2018 and 2024. Therefore, Table 1 describes each of the articles: identification of the authors, journal, objective, method, sample, results and conclusion.

Table 1: Summary of studies

Cheng et al. (2022)⁴⁵ - JAMA Network Open	
Objective/Sample	- To investigate the effectiveness of tuina therapy combined with <i>yijinjing</i> exercise compared to tuina therapy alone in patients with chronic nonspecific neck pain; - 102 participants with chronic nonspecific neck pain.
Method/Type of study	- Quantitative method, this was a randomized, open, blinded clinical trial lasting 12 weeks (8 weeks of intervention and 4 of observational follow-up).
Results	- The mean difference in Visual Analog Scale (VAS) scores from baseline at week 8 for the tuina group combined with <i>yijinjing</i> was -5.4. At week 8, the difference in VAS scores was -1.2 between the tuina group and the tuina combined with <i>yijinjing</i> group. The efficacy of tuina combined with <i>yijinjing</i> in the treatment of chronic nonspecific neck pain remained at the 12-week follow-up.
Conclusion	- Tuina combined with <i>yijinjing</i> was more effective than tuina therapy alone in terms of pain, functional recovery and anxiety at week 8, and the effectiveness remained at week 12.
Deng e Wu (2023)⁴⁷ - European Review for Medical and Pharmacological Sciences	
Objective/Sample	- Systematically evaluate the application of Chinese medicine in the treatment of cervical and lumbar pain; - 57 articles.
Method/Type of study	- Meta-analysis and SLR.
Results	- TCM has surpassed Western medicine in the treatment of neck pain and lower back pain and analgesic effects.
Conclusion	- TCM has better clinical efficacy and analgesic effects when compared to Western medicine in the treatment of cervical and lumbar pain, presenting a positive safety profile.
Lyu et al. (2022)⁴⁶ - Technology and Health Care	
Objective/Sample	- Discuss the indications for conventional acupuncture therapy (CAT) and movement style acupuncture therapy (MSAT) combined with CAT in patients with neck pain with data mining; - 76 participants with chronic neck pain were distributed into two groups: the intervention group, subjected to MSAT and CAT, and the control group, subject to CAT.
Method/Type of study	- Quantitative, as it is a randomized, blind and controlled trial.
Results	- In patients in the intervention group (MSAT and CAT) who scored between 41.70 and 68.70 in physical functioning before treatment, MSAT may improve activity restriction and have an analgesic effect. In patients in the control group who scored between 56.09 and 66.09 in general health before treatment, CAT may have a curative effect.
Conclusion	- Both MSAT and CAT can improve the quality of life of patients suffering from neck pain. However, CAT is more suitable for patients who are in good general health before treatment, and MSAT combined with CAT is more suitable for patients who have a mild to moderate decline in physiological function.
Yang et al. (2018)⁴⁹ - Journal of Traditional Chinese Medical Sciences	
Objective/Sample	- Compare the effects of pulsating and static cupping therapy on nonspecific neck pain and blood perfusion of local cutaneous microcirculation; - 70 participants with nonspecific neck pain were distributed into four groups: low-frequency pulsating cupping therapy, high-frequency pulsating cupping therapy, static cupping therapy, and waiting list.
Method/Type of study	- Quantitative method, as it is a controlled and randomized clinical trial.
Results	- Participants in the low-frequency and high-frequency pulsating cupping groups showed a significant reduction in VAS scores compared to participants in the static cupping group.

Conclusion	- Pulsating cupping therapy may have a greater analgesic effect on nonspecific neck pain compared to static cupping therapy, which may be associated with its more positive effect on improving local blood perfusion of the skin.
Yu et al. (2024) ⁴⁸ - Medicine	
Objective/Sample	- Investigate the efficacy and safety of acupuncture in the treatment of neck stiffness, one of the signs of cervicgia, comparing acupuncture with conventional treatment; - 10 randomized controlled clinical trials, including 754 patients.
Method/Type of study	- Meta-analysis and SLR.
Results	- The treatment group (subjected exclusively to acupuncture or in combination with conventional treatment) showed an improvement in the total effective rate in relation to the control group (subjected only to conventional treatment), with a decrease in VAS scores, neck disability index, enabling restoration of cervical range of motion.
Conclusion	- Acupuncture therapy is more effective than conventional treatments in relieving pain, reducing functional disabilities and increasing cervical range of motion in patients with stiff necks.
Zhang et al. (2018) ⁵⁰ - Journal of Traditional Chinese Medical Sciences	
Objective/Sample	- To investigate the characteristics of "Jin Shang" in young adults with chronic neck pain and to investigate the correlation of "Jin Shang" with pain intensity and life disabilities, through a cross-sectional study; - 50 participants with chronic neck pain and 16 healthy participants.
Method/Type of study	- Quantitative method, as this is a cross-sectional study.
Results	- In patients with chronic neck pain, the thickness of the semispinalis capitis during isometric contraction was thinner than that of healthy participants who formed the control group. The study also showed the existence of significant relationships between the thickness of the neck extensor muscle, the VAS and the Northwick Park Questionnaire and the multiple linear regression demonstrated that the thickness of the neck extensor muscle in patients with chronic neck pain was a significant predictor of the intensity of pain and disability.
Conclusion	- There is a significant difference in neck extensor muscle thickness in young adults with chronic neck pain compared to control group participants. Changes in neck extensor muscle thickness, both at rest and during contraction, are moderately related to neck pain and life disabilities. The study also concludes that there is a correlation between "Jin Shang" and the symptoms of chronic neck pain, which demonstrates that the neck extensor muscle plays an important role in chronic neck pain.

4. Discussion

The results obtained highlight the positive impact of the various TCM techniques in the treatment of cervical pain, which consists of discomfort or pain in the posterior or posterolateral region of the neck ⁶. This evidence is supported by the results obtained by Deng and Wu ⁴⁷, who found that TCM has better clinical efficacy and analgesic effect when compared with Western medicine in the treatment of cervical and lumbar pain, presenting a positive safety profile. However, the results of Seo *et al.* ⁵¹ partially contradict these findings, as they report that acupuncture and conventional medicine for chronic neck pain are similarly effective in terms of pain and disability.

Furthermore, the literature on the subject has shown that TCM can have a positive impact on pain relief, for example, through acupuncture, by the action of endogenous neurotransmitters – endorphins and enkephalins – which are released when specific points are stimulated in the human body, the acupoints ⁵². The results obtained converge with this finding; the study by Yu *et al.* ⁴⁸ demonstrated that acupuncture is extremely advantageous, being particularly more effective than conventional treatments in relieving pain, reducing functional disabilities and increasing the amplitude of cervical movement in patients with neck stiffness. However, according to the findings of Seo *et al.* ⁵¹, acupuncture combined with conventional medicine contributes to even greater pain relief and electroacupuncture is even more effective. He *et al.* ⁵³ studied the effect of acupuncture in

the treatment of chronic neck and shoulder pain in sedentary female workers. After treatment with acupuncture, applied 10 times over three to four weeks, on anti-pain acupuncture points (in the test group) or placebo points (in the control group), the authors found that the intensity and frequency of pain decreased more in the test group. In addition, although acupuncture was applied to placebo points in the control group, this group also showed improvements. However, these were more pronounced in the test group that received acupuncture at the anti-pain points. According to this study, proper treatment with acupuncture can reduce chronic neck pain, as well as shoulder and headache pain⁵³.

In the same sense, Lyu *et al.*⁴⁶ also demonstrated that both MSAT and CAT can improve the quality of life of patients suffering from neck pain. However, they highlighted that CAT is more suitable for patients who have a good general health status before treatment and MSAT combined with CAT is more suitable for patients who have a mild to moderate decline in physiological function⁴⁶. In this regard, it is important to mention the systematic review and meta-analysis carried out by Fang *et al.*⁵⁴, who found that acupuncture as a complementary therapy can relieve post-treatment pain lasting at least three months for patients with chronic neck pain. They also report that although acupuncture as adjuvant therapy is not superior to sham acupuncture, it shows sustained efficacy in improving functional impairment for more than three months, with a good safety profile⁵⁴.

TCM is an ancient medical practice that offers a holistic approach and uses various techniques such as acupuncture, herbal medicine, tuina, moxibustion, cupping therapy, Chinese food therapy and energy exercises⁵⁵. In this regard, Cheng *et al.*⁴⁵ found that tuina combined with *yijinjing* is more effective than tuina therapy alone in terms of pain, functional recovery, and anxiety. In addition to *yijinjing*, some studies found in the literature address another exercise, such as *Qi Gong*, which has positive effects in the treatment of chronic neck pain⁵⁶, namely calming and relaxing effects⁵⁷, reducing neck pain and disability⁵⁸. Comparing these findings with those of the systematic review and meta-analysis carried out by Yuan *et al.*⁵⁹, it is clear that several TCM techniques are effective in treating neck pain. The results of the study show that acupuncture, acupressure and cupping therapy can be effective in the immediate treatment of pain and disability associated with chronic neck pain and chronic low back pain.

On the other hand, and focusing on another TCM technique, Yang *et al.*⁴⁹ concluded that pulsating cupping therapy may have a greater analgesic effect on nonspecific neck pain compared to static cupping therapy, which may be associated with its more positive effect on improving local blood perfusion of the skin. However, for Leem⁶⁰, who studied the long-term effect of cupping therapy on chronic neck pain, cupping treatments were ineffective in reducing the intensity of neck pain in the long term. On the other hand, it highlights that cupping therapy positively affected physical function and quality of life (up to two years) in patients with neck pain, namely in the body pain subscale and physical component summary⁶⁰. This evidence is in line with that presented by Kim *et al.*⁶¹, who found that cupping therapy reduced neck pain in patients when compared to groups that were not subjected to any intervention or as a complementary treatment, improving function and their quality of life.

Zhang *et al.*⁵⁰, when investigating the characteristics of "*Jin Shang*", tendon trauma, in young adults with chronic neck pain and its relationship with pain intensity and life disabilities, showed that the performance of "*Jin Shang*" can contribute to reducing chronic neck pain, showing a correlation between "*Jin Shang*" and chronic neck pain symptoms, i.e. the more severe the tissue alterations identified, the greater the pain intensity and limitations in daily life. These results are in line with the literature, as the Wu⁶² study showed that neck pain symptoms have characteristics of TCM syndromes, with neck pain being a category of "*Jin Shang*" syndrome. The study by Zhang *et al.*⁵⁰ shows that when there is a disturbance in "*Jin Shang*", neck pain can be intensified, underlining the need to assess the neck muscles in the diagnosis and treatment of neck diseases.

5. Conclusion

It is concluded that TCM is effective in the treatment of neck pain, representing an alternative or complementary practice to conventional medicine. It has been found that within the scope of the various techniques that TCM contemplates, acupuncture, cupping therapy, tuina (when combined with the *yijinjing* exercise) and the guidelines centred on “*Jin Shang*”, are effective for pain relief, increased functionality and improved quality of life for patients.

This review highlights the holistic approach of TCM, which integrates energetic and physiological concepts, enabling a more comprehensive picture of health. Given what has been said, this study is expected to contribute to a greater understanding of the effectiveness of TCM in the treatment of neck pain, providing insights for clinical practice and for the design of health policies that integrate complementary approaches in the care provided to patients with neck pain.

However, this study does have some limitations. Firstly, it is understood that the sample is small, so it would be important to include more evidence. Secondly, this review only included studies that were freely accessible, so there may have been relevant studies that may have been left out. Therefore, as a suggestion for future research, it is suggested that a literature review be carried out which includes a more representative sample of studies, and that a systematic literature review be carried out.

Credit author statement: Conceptualization: E.S.C. and L.S.S.; Investigation: E.S.C. and L.S.S.; Writing – Original Draft Preparation: E.S.C. and L.S.S.; Writing – Review & Editing: E.S.C. and L.S.S. All authors have read and agreed to the published version of the manuscript.

Conflicts of Interest: The authors declare no conflict of interest.

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The original contributions presented in this study are included in the article. Further inquiries can be directed to the corresponding author.

References

1. International Association for the Study of Pain. Cervicalgia [Internet]. 2009. Available from: <https://www.aped-dor.org/images/FactSheets/DorMusculoEsqueletica/pt/NeckPain.pdf>
2. Moré A, Min L, Costi J, Santos A. Acupuntura e dor numa perspetiva translacional. *Ciência e Cultura*. 2011; 63(2): 44-48.
3. Santos D, Sperotto D, Pinheiro U. A medicina tradicional chinesa no tratamento do transtorno de ansiedade: um olhar sobre o stress. *Revista Contexto & Saúde*. 2011; 10(20): 103-112. doi: <https://doi.org/10.21527/2176-7114.2011.20.103-112>
4. Morelli J, Rebelatto J. A eficácia da terapia manual em indivíduos cefaleicos portadores e não-portadores de degeneração cervical: análise de seis casos. *Revista Brasileira de Fisioterapia*. 2007; 11(4): 325-329. doi: <https://doi.org/10.1590/S1413-35552007000400013>
5. Rabello G, Forte L, Galvão A. Avaliação clínica da eficácia da combinação paracetamol e cafeína no tratamento da cefaleia tipo tensão. *Arquivos de Neuro-Psiquiatria*. 2000; 58(1): 90-98. doi: <https://doi.org/10.1590/S0004-282X200000100014>
6. Santos L, Morete M, Cordon F, Malezan W. Acupuntura no tratamento das cervicalgias: estudo de revisão integrativa. *Cadernos de Naturologia e Terapias Complementares*. 2015; 4(7): 49-57. doi: <https://doi.org/10.19177/cntc.v4e7201549-57>
7. Guyton A, Hall J. *Textbook of Medical Physiology*. Mississippi: Elsevier Saunders; 2006.
8. Misailidou V, Malliou P, Beneka A, Karagiannidis A, Godolias G. Assessment of patients with neck pain: a review of definitions, selection criteria, and measurement tools. *Journal of Chiropractic Medicine*. 2010; 9(2): 49-59. doi: <https://doi.org/10.1016/j.jcm.2010.03.002>

9. Childs J, Cleland J, Elliot J, Teyhen S, Wainner R, Whitman J, et al. Neck pain: Clinical practice guidelines linked to the international classification of functioning, disability, and health, from the Orthopaedic section of the American Physical Therapy Association. *Journal of Orthopaedic and Sports Physical Therapy*. 2008; 38(9): A1-A34. doi: <https://doi.org/10.2519/jospt.2008.0303>
10. Haldeman S, Corroll L, Cassidy D. Finding from the bone and joint decade 2000 to 2010 task force on neck pain and its associated disorders. In: *Special sections: world congress on neck pain 2010*. 2010; USA, American College of Occupational and Environmental Medicine. doi: <https://doi.org/10.1097/JOM01013e318H44f3b>
11. Leitão A. *Classificação Internacional da Funcionalidade, Incapacidade e Saúde*. Lisboa: Direção-Geral da Saúde; 2004.
12. Hogg-Johnson S, Van der Velde G, Carroll L, Holm L, Cassidy J, Guzman J, et al. The burden and determinants of neck pain in the general population: results of the bone and joint decade 2000-2010 task force on neck pain and its associated disorders. *Journal of Manipulative and Physiological Therapeutics*. 2009; 32(2 Sup.): S46-S60. doi: <https://doi.org/10.1016/j.jmpt.2008.11.010>
13. Fejer R, Kyvik K, Hartvigsen J. The prevalence of neck pain in the world population: a systematic critical review of the literature. *European Spine Journal*. 2006; 15: 834-848. doi: <https://doi.org/10.1007/s00586-004-0864-4>
14. David J, Modi S, Aluko A, Robertshaw C, Farebrother J. Chronic neck pain: a comparison of acupuncture treatment and physiotherapy. *British Journal of Rheumatology*. 1998; 37(10): 1118-1122. doi: <https://doi.org/10.1093/rheumatology/37.10.1118>
15. Soares J, Weber P, Trevisan M, Trevisan C, Rossi A. Correlação entre postura da cabeça, intensidade da dor e índice de incapacidade cervical em mulheres com queixa de dor cervical. *Fisioterapia e Pesquisa*. 2012; 19(1): 68-72. doi: <https://doi.org/10.1590/S1809-29502012000100013>
16. Bahat H, Weiss P, Laufer Y. The Effect of Neck Pain on Cervical Kinematics, as Assessed in a Virtual Environment. *Archives of Physical Medicine and Rehabilitation*. 2010; 91(12): 1884-1890. doi: <https://doi.org/10.1016/j.apmr.2010.09.007>
17. Mendonça P, Eufrásio V, Gaioso V, Campos A. Benefícios da acupuntura no tratamento da cervicalgia – uma revisão bibliográfica. In: *Anais do XV Encontro Latino Americano de Iniciação Científica, XI Encontro Latino Americano de Pós-Graduação e V Encontro Latino Americano de Iniciação Científica Júnior* [Internet]. 2011; São Paulo, Brasil. p. 1-5. Available from: https://www.inicepg.univap.br/cd/INIC_2011/anais/arquivos/RE_0300_0537_01.pdf
18. Greten H. *Clinical subjects – scientific Chinese Medicine – The Heidelberg Model*. Heidelberg: Heidelberg School Edition – courseversion; 2010.
19. Teixeira E. *Efeito agudo da acupuntura coreana da mão na cervicalgia: Desenho de um estudo clínico e resultados preliminares* [Master Thesis]. Porto: Instituto de Ciências Biomédicas Abel Salazar da Universidade do Porto; 2013.
20. Kazemi A, Muñoz-Corsini L, Martín-Barallat J, Pérez-Nicolás M, Henche M. Estudio etiopatogénico de la cervicalgia en la población general basado en la exploración física. *Revista de la Sociedade Española del Dolor*. 2000; 7: 220-224.
21. Geertie A, Aniens W, Bongers P, Bouter L, Van der Wal G. Psychosocial Risk Factor for neck pain: A systematic review. *American Journal of Industrial Medicine*. 2001; 39(2): 180-193. doi: [https://doi.org/10.1002/1097-0274\(200102\)39:2<180::aid-ajim1005>3.0.co;2-#](https://doi.org/10.1002/1097-0274(200102)39:2<180::aid-ajim1005>3.0.co;2-#)
22. World Health Organization. *Benchmarks for training in traditional/complementary and alternative medicine: Benchmarks for training in traditional Chinese medicine*. Geneva: World Health Organization; 2010. 43
23. Santos G. *Práticas corporais e saúde: algumas contribuições da medicina tradicional chinesa para o contexto brasileiro*. *Caderno de Educação Física e Esporte*. 2022; 20(e-28260): 1-7. doi: <http://dx.doi.org/10.36453/cefe.2022.28260>
24. Maciocia G. *Os fundamentos da medicina chinesa: um texto abrangente para acupunturistas e fitoterapeutas – Capítulo 1 – Natureza do conceito Yin e Yang*. São Paulo: Edições Roca; 1996.
25. Contatore O, Tesser C. *Medicina tradicional chinesa/acupuntura*. In: Tesser C, editor. *Medicinas complementares: o que é necessário saber (homeopatia e medicina tradicional chinesa/acupuntura)*. São Paulo: UNESP; 2010. p. 119-200.
26. Rocha S, Gallian D. Uma nova abordagem dos estudos da medicina tradicional chinesa no Ocidente. *Physis: Revista de Saúde Coletiva*. 2013; 23(3): 995-1001. doi: <https://doi.org/10.1590/S0103-73312013000300018>
27. Jacques L. *As bases científicas da medicina tradicional chinesa*. São Paulo: Annablume; 2005. 170
28. Gardin A, Felipe F. Comparative study between two treatment protocols – Fleur de Lis and Unitary Channel method for cervical pain. *Revista Dor*. 2013; 14(4): 290-294. doi: <https://doi.org/10.1590/S1806-00132013000400011>
29. Zhou J, Zhu J, Chen M, Jiang M, Zhang Z, Zhan Z, Zhang X. Logical thinking in pattern differentiation of Traditional Chinese Medicine. *Journal of Traditional Chinese Medicine*. 2013; 33(1): 137-140. doi: [https://doi.org/10.1016/s0254-6272\(13\)60116-8](https://doi.org/10.1016/s0254-6272(13)60116-8)

30. Mao J, Wang C. Cultural interpretation on Xiang thinking of Traditional Chinese medicine. *Journal of Traditional Chinese Medicine*. 2013; 33(4): 545-548. doi: [https://doi.org/10.1016/s0254-6272\(13\)60163-6](https://doi.org/10.1016/s0254-6272(13)60163-6)
31. Min L, Darella M, Pereira O. Curso básico de acupuntura e medicina tradicional chinesa. Florianópolis: Instituto de Pesquisa e Ensino de Medicina Tradicional Chinesa; 2000.
32. Wen T. Manual terapêutico de acupuntura. São Paulo: Editora Manole; 2008. 600
33. Luca A. Medicina tradicional chinesa – acupuntura e tratamento da síndrome climatérica [Tese de Doutorado]. São Paulo: Faculdade de Medicina da Universidade de São Paulo; 2008.
34. Silva C. Uma visão do sistema de medicina tradicional chinesa à luz do conhecimento científico atual [Master Thesis]. Coimbra: Faculdade de Medicina da Universidade de Coimbra; 2016.
35. Leung P-C, Xue C, Cheng Y-C. A comprehensive guide to Chinese medicine. River Edge: World Scientific Publishing Co; 2003. 356
36. Secretin A, Vieira M, Varela A, Amaral P. Aplicação do ponto Hòu Xi (ID 3) no tratamento da cervicalgia. *Macau Journal of Chinese Medicine*. 2020; 06: 112-125.
37. Florian M, Rando-Meirelles M, Sousa M. Uso da acupuntura em um caso de parestesia dos nervos alveolar inferior e lingual. *Revista da Associação Paulista de Cirurgiões Dentistas*. 2012; 66(4): 312-315
38. Yi Dao – Centro de Acupuntura. Cervicalgias – causas das cervicalgias (dor no pescoço) à luz da Medicina Tradicional Chinesa [Internet]. 2023. Available from: <https://centrodeacupuntura.pt/areas-clinicas/cervicalgias/>
39. Cui X, Trinh K, Wang Y-J. Chinese herbal medicine for chronic neck pain due to cervical degenerative disc disease. *Cochrane Database Systematic Review*. 2010; 1: CD006556. doi: <https://doi.org/10.1002/14651858.CD006556.pub2>
40. Pautasso M. Ten simple rules for writing a literature review. *PloS Computational Biology*. 2013; 9(7): e1003149. doi: <https://doi.org/10.1371/journal.pcbi.1003149>
41. Rother E. Revisão sistemática X revisão narrativa. *Acta Paulista de Enfermagem*. 2007; 20(2): v-vi. doi: <https://doi.org/10.1590/S0103-21002007000200001>
42. Elias C, Silva L, Martins M, Ramos N, Souza M, Hipólito R. Quando chega o fim? Uma revisão narrativa sobre terminalidade do período escolar para alunos deficientes mentais. *Revista Eletrônica de Saúde Mental Álcool e Drogas*. 2012; 8(1): 48-53.
43. Cordeiro A, Oliveira G, Renteria J, Guimarães C, Grupo de Estudo de Revisão Sistemática do Rio de Janeiro. Revisão sistemática: Uma revisão narrativa. *Comunicação Científica*. 2007; 34(6): 428-431.
44. Donato H, Donato M. Etapas na construção de uma revisão sistemática. *Acta Médica Portuguesa*. 2019; 32(3): 227-235. doi: <https://doi.org/10.20344/amp.11923>
45. Cheng Z, Zhang S, Gu Y, Chen Z, Xie F, Guan C, Fanf M, Yao F. Effectiveness of tuina therapy combined with yijinjing exercise in the treatment of nonspecific chronic neck pain: A randomized clinical trial. *JAMA Network Open*. 2022; 5(12): e2246538. doi: <https://doi.org/10.1001/jamanetworkopen.2022.46538>
46. Lyu R, Wen Z, Tang W, Yang X, Wen J, Wang B, Gao M. Data mining-based detection of the clinical effect on motion style acupuncture therapy combined with conventional acupuncture therapy in chronic neck pain. *Technology and Health Care*. 2022; 20(S1): S521-S533. doi: <https://doi.org/10.3233/THC-228048>
47. Deng X, Wu S. A comprehensive meta-analysis of traditional Chinese and Western medicine for neck and low back pain. *European Review for Medical and Pharmacological Sciences*. 2023; 27(1): 10284-10300. doi: https://doi.org/10.26355/eurev_202311_34304
48. Yu B, Yang Y, Fang J, Guo Y, Qiu Y, Yang S, Ran S, Zheng K, Wang T, Huang Y. Efficacy and safety of acupuncture treatment for stiff neck: A systematic review and meta-analysis. *Medicine*. 2024; 103(45): e40415. doi: <https://doi.org/10.1097/MD.00000000000040415>
49. Yang Y, Ma L, Niu T, Wang J, Song Y, Lu Y, Yang X, Niu X, Mohammadi A. Comparative study on the effects of pulsating and static cupping on non-specific neck pain and local skin blood perfusion. *Journal of Traditional Chinese Medical Sciences*. 2018; 5(4): 400-410. doi: <https://doi.org/10.1016/j.jtcms.2018.09.001>
50. Zhang D, Ma Y, Yang L, Du W, Gan W, Xu M, Guo Y, Shi Z, Qi Y, Wang Q. The characteristics and correlative research of “Jin Shang” associated with chronic neck pain in young adults based on ultrasound imaging. *Journal of Traditional Chinese Medical Sciences*. 2018; 5(4): 411-419. doi: <https://doi.org/10.1016/j.jtcms.2018.10.004>

51. Seo V, Lee K-B, Shin J-S, Lee J, Kim E-R, Ha I-H, Ko V, Lee Y. Effectiveness of acupuncture and eletroacupuncture for chronic neck pain: A systematic review and meta-analysis. *The American Journal of Chinese Medicine*. 2017; 45(8): 1-23. doi: <https://doi.org/10.1142/S0192415X17500859>
52. Carvalho F, Silva L, Rodrigues P, Vale B, Marins F. Bases neurológicas da acupuntura no tratamento de analgesia. *Revista Científica Multidisciplinar Núcleo do Conhecimento*. 2019; 02(09): 144-168. doi: <https://doi.org/10.32749/nucleodoconhecimento.com.br/saude/bases-neurofisiologicas>
53. He D, Veiersted K, Høstmark A, Medbø J. Effect of acupuncture treatment on chronic neck and shoulder pain in sedentary female workers: a 6-month and 3-year follow-up study. *Pain*. 2004; 109(3): 299-307. doi: <https://doi.org/10.1016/j.pain.2004.01.018>
54. Fang J, Shi H, Wang W, Chen H, Yang M, Gao S, Yao H, Zhu L, Yan Y, Liu Z. Durable effect of acupuncture for chronic neck pain: A systematic review and meta-analysis. *Current Pain and Headache Reports*. 2024; 28(9): 957-969. doi: <https://doi.org/10.1007/s11916-024-01267-x>
55. Oliveira A. Fitoterapia chinesa [Master Thesis]. Porto: Faculdade de Ciências da Saúde da Universidade Fernando Pessoa; 2016.
56. Rendant D, Pach D, Ludtke R, Reissshauer A, Witt C. Qigong for chronic neck pain – A randomized controlled trial. *European Journal of Integrative Medicine*. 2009; 1(4): 212. doi: <https://doi.org/10.1016/j.eujim.2009.08.134>
57. Holmberg C, Farahani Z, Witt C. How Do Patients with Chronic Neck Pain Experience the Effects of Qigong and Exercise Therapy? A Qualitative Interview Study. *Evidence-Based Complementary and Alternative Medicine*. 2016; 1-8. doi: <https://doi.org/10.1155/2016/8010891>
58. Skoglund L, Josephson M, Wahlstedt K, Lampa E, Norback D. Qigong training and effects on stress, neck-shoulder pain and quality life in a computerized office environment. *Complementary Therapies in Clinical Practice*. 2011; 17(1): 54-57. doi: <https://doi.org/10.1016/j.ctcp.2010.09.003>
59. Yuan Q-L, Guo T-M, Liu L, Sun F, Zhang Y-G. Traditional chinese medicine for neck pain and low back pain: A systematic review and meta-analysis. *PLoS One*. 2015; 10(2): e0117146. doi: <https://doi.org/10.1371/journal.pone.0117146>
60. Leem J. Long-term effect of cupping for chronic neck pain. *Integrative Medicine Research*. 2014; 3(4): 217-219. doi: <https://doi.org/10.1016/j.imr.2014.10.001>
61. Kim S, Lee S-H, Kim M-R, Kim E-J, Hwang D-S, Lee J, Shin J-S, Ha I-H, Lee Y. Is cupping therapy effective in patients with neck pain? A systematic review and meta-analysis. *BMJ Open*. 2018; 8(11): e021070. doi: <https://doi.org/10.1136/bmjopen-2017-021070>
62. Wu J. TCM pattern characteristics of neck pain in youth. *Journal of Traditional Chinese Medicine*. 2013; 54(22): 1937-1940