

## Chapter 45

# The Future of Chiropractic: And Then What?

Huma Qayyum<sup>1</sup>, Seemab Sabir<sup>2</sup>, Muhammad Ibrahim<sup>1</sup>, Hina Qayyum<sup>3</sup>, Muskan Faisal Awan<sup>4</sup>, Zain Ul Abidin<sup>1</sup>, Fatima Zahra Naqvi<sup>5</sup>, Eisha Iftikhar<sup>1</sup>, Nawal Fatima<sup>1</sup> and Muhammad Arif Zafar<sup>1\*</sup>

<sup>1</sup>Department of Clinical Studies, Faculty of Veterinary and Animal Sciences, Pir Mehr Ali Shah-Arid Agriculture University, 46300, Rawalpindi-Pakistan

<sup>2</sup>Department of Clinical Studies, Faculty of Veterinary and Animals Sciences, University of Poonch, Rawalkot, Azad Jammu & Kashmir-Pakistan

<sup>3</sup>National Institute of Health (NIH), Islamabad-Pakistan

<sup>4</sup>Department of Clinical Veterinary Medicine and Surgery, College of Veterinary Sciences, University of Agriculture Peshawar-Pakistan

<sup>5</sup>Senior Veterinary Officer, Garden City Zoo, Bahria Town Phase-7, Rawalpindi-Pakistan

\*Corresponding author: dr.mazafar@uair.edu.pk

### ABSTRACT

This chapter looks into the antecedents of the chiropractic care that has up to today become an established form of medical practice. It explores such aspects of chiropractic therapy as spinal manipulation, on which the system is based; holistic view of health; non-invasive nature of the treatment and the importance of the nervous system. The chapter also looks into the existing trends and some of the problems experienced in the field including the question of regulations and the public perception, and the place of chiropractors in attending human and animal patients. Moreover, it discusses the prospects of the future of chiropractic care as well as the possible trends and strategies may define its evolution in worldwide contexts of the healthcare market. The Six Pillars is presented as a way to establish directions for dealing with change in the future; this change has to be modelled and forecast within the chiropractic profession.

### KEYWORDS

Chiropractic Care, Alternative Medicine, Six Pillars, Future, Profession

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### INTRODUCTION

Chiropractic care is a branch of medicine that specializes in the identification, management, and avoidance of conditions affecting the musculoskeletal system, especially the spine. Chiropractic therapy dates back to the late 19th century, and its main focus has always been on manual adjustments and manipulations to rectify spinal misalignments. The theory behind this treatment is that the nerve system's disruption can have an impact on general health (Jenks et al., 2022). As per WHO, The field of chiropractic care is dedicated to the diagnosis, treatment, and prevention of conditions affecting the musculoskeletal system, especially the spine. Chiropractic care, which dates back to the late 1800s, places a strong emphasis on the health of the spine and how it affects the nervous system as a whole. Manual spine manipulation, or adjustment, is the mainstay of chiropractic care. Its goal is to return the spine to its natural alignment and function, which should reduce pain and enhance general health (Anonymous, 2023).

The phrase "chiropractic" refers to the use of manual therapy or spinal manipulation to cure a variety of illnesses. It is derived from the Greek words "cheir," which means "hand," and "praxis," which means "practice" or "done by". The field of veterinary chiropractic is still very new and is developing quickly. Chiropractic treatment focuses on the spine to slow the course of the illness. It is a fascinating and quickly developing therapy option for musculoskeletal discomfort in animal chiropractic care. It is a functional neurology-based integrated medical diagnostic and therapy approach (Haq et al., 2017). Although the philosophy and practice of spinal manipulation date back to ancient cultures, chiropractic was established in 1895 by Daniel David Palmer. He founded the Davenport, Iowa-based Palmer Infirmary and Chiropractic Institute in 1897. The idea behind the founding of modern animal chiropractic was that it ought to have a role in the treatment of animals. With veterinary and chiropractic degrees from Michigan State University and Palmer College of Chiropractic in Davenport, Iowa, respectively, Sharon Willoughby made significant contributions to the development of this concept. She made the decision to focus all of her efforts on improving animal chiropractic care and education not long after earning her Doctor of Chiropractic degree in 1986 (Eschbach et al., 2008; Cifuentes et al., 2011).

Chiropractic care has also come to be recognized in veterinary medicine as an effective adjunctive therapy for animals, especially when it comes to musculoskeletal problems. It treats a wide range of animals, with a concentration on treating horses and dogs. It is frequently used to treat ailments in dogs that affect movement as well as lameness, stiffness, and performance-related concerns in horses (Maldonado et al., 2022).

### **Chiropractic Fundamentals and Concepts**

Chiropractic therapy targets certain joints or anatomical areas with manually applied, high velocity, low amplitude forces (also known as adjustments) in order to produce healing effects in the articulations, muscles, and neurological reflexes. To maximize spinal joint neuromuscular performance, the aim of chiropractic care is to guarantee all spinal segments move smoothly and in unison (Eschbach et al., 2008).

Chiropractic care takes into account the wider effects of spinal dysfunction on the neurological system in addition to treating mechanical abnormalities of the spine. Research demonstrating the physiological benefits of spinal manipulation on the neural system, including enhancements in musculoskeletal and autonomic functioning, has provided support for this comprehensive approach ( Bishop et al., 2019; Miller, 2022).

### **Key Concepts**

#### **1. Spinal Manipulation**

One of the main components of chiropractic care is spine manipulation, sometimes referred to as spinal adjustment. It incorporates manual methods intended to treat vertebral subluxations, which are spinal misalignments that can impair nerve function and be a contributing factor in a number of health problems. Chiropractic theory places a strong emphasis on this procedure because it restores proper nerve function and enhances general health by correcting these subluxations (Miller, 2022).

#### **2. Holistic Approach**

A holistic approach to health is embraced by chiropractic therapy, which emphasizes how the body can heal itself when the spine is in the correct alignment. In addition to spinal adjustments, chiropractors frequently incorporate lifestyle recommendations like exercise, diet, and stress reduction into their patients' treatment regimens (Gyer et al., 2019; Miller, 2022).

#### **3. Non-Invasive Treatment**

The non-invasive and drug-free nature of chiropractic care is one of its main tenets. Without the need for surgery or medicine, chiropractors treat musculoskeletal issues with manual approaches. This method is especially appreciated for its capacity to address underlying problems with the spine and neural system in order to treat pain and other disorders (Bishop et al., 2019; Gyer et al., 2019).

#### **4. Nervous System Integrity**

According to chiropractors, general health depends on the nerve system's integrity being preserved. Spinal misalignments can cause a variety of health issues by interfering with the nervous system's ability to function. Chiropractic therapy seeks to rectify these subluxations in order to restore normal nerve function and support the body's natural ability to maintain health (Gyer et al., 2019).

### **Current Trends and Challenges**

An increasing amount of research emphasizing the benefits of chiropractic care for treating neuro-musculoskeletal problems has influenced recent trends in chiropractic care. Current research hotspots include the integration of chiropractic therapy in controlling problems including headaches, back pain, and other musculoskeletal difficulties, according to studies like the bibliometric analysis by Song et al. (2024). Alongside this, chiropractic care has gained more respect in the medical world; yet, obstacles still need to be overcome before chiropractic therapy can be widely acknowledged and integrated into traditional healthcare systems (Riggs III, 2024). The emphasis placed by the chiropractic profession on evidence-based practices is another noteworthy trend. The increasing number of publications and research projects aiming at comprehending the mechanics and effectiveness of chiropractic treatments is indicative of the drive towards rigorous scientific validation of chiropractic procedures ( Bishop et al., 2019; Song et al., 2024).

### **Challenges**

#### **1-Regulatory Issues**

Globally, there are many regulatory obstacles for chiropractic care. Every country has a varied set of regulations for this profession, with differing recognition, educational requirements, and practicing scopes. For instance, whilst chiropractors are limited to physical therapy in certain areas, they have a broad scope of practice in others, including diagnostic authority. The widespread acceptance of chiropractic care and its incorporation into the larger healthcare system are hampered by this contradiction. In addition, the profession continues to face challenges from continuous discussions about the need for stronger regulations, particularly with regard to the training and certification of chiropractors (Riggs III, 2024).

## 2-Public Perception

The general public's opinion of chiropractic care differs greatly. Some people believe it to be a valid and useful therapy option, particularly for musculoskeletal conditions, but others are dubious because they don't know enough about it or because of inaccurate representations in the media and online. The skepticism frequently results from doubts over the effectiveness and safety of specific chiropractic procedures, especially those that entail spinal manipulations. Improving communication and public education to address these issues is crucial to improving the acceptance and reputation of the profession (Song et al., 2024).

### Cases That Can Benefit From Chiropractic

In 2017, the American College of Physicians published updated guidelines recommending spinal manipulation as a primary treatment for both acute and persistent low back pain. Both in people and animals, chiropractic therapy has a high success rate in treating cases of acute and chronic low back pain. Chiropractic care is currently not the primary line of treatment for back discomfort in animals, though. Exercise restriction and pain medication are recommended as treatments for back pain in animals in Ettinger's Textbook of Veterinary Internal Medicine (Dator, 2009; LeFebvre et al., 2012; Marziani, 2018).

In a series of nerve root compression studies on animals, it was discovered that a little 10 mm Hg of compression, or roughly the weight of a dime, may reduce a nerve's conduction by 50% after 30 minutes and by 40% in the first 15 minutes. According to another research, this function decline could range from 60% to 75%. It took 15 to 30 minutes to recover to almost normal function after the compression was removed (Marziani, 2018).

### Chiropractic Treatment Protocols

Depending on the ailment, whether it is acute or chronic, and whether the goals are preventative or chronic condition management, a chiropractor's recommended frequency of adjustments will vary. Different practitioners have different recommendations for the frequency of treatments. I typically meet patients every one to two weeks for a total of two to three treatments. If the patient is responding well, the intervals between treatments might be progressively widened in order to gauge effectiveness (Marziani, 2018).

In chiropractic therapy, more than one hundred techniques are used. The most common method employs osseous modifications and is referred to as diversified. A manual, high-velocity, short-lever thrust adjustment is included. The same outcome is also achieved with the use of an activator, a tiny, portable device. In order to restore joint mobility, the adjustment is directed towards a hypomobile motor unit. The next step is to apply a low-amplitude thrust with enough force to release fixations near the end of passive range of motion, or joint play. Every now and again while making the adjustment, there is a popping sound or "audible", and humans are more likely than animals to exhibit these. An audible signal is not necessary for a successful adjustment; it just signals a decrease in intra-articular pressure. In terms of contact points (spinous, mammillary, or transverse processes), direction, force, depth, and timing, the adjustment is quite precise (LeFebvre et al., 2012; Haq et al., 2017).

Each situation is different. While some patients with spinal arthritis may benefit from adjustments every four weeks, others may benefit more from treatments every twelve weeks. The author advises against waiting more than four to six months between adjustments because the spine is always moving and under tension. In severe circumstances, a few adjustments can be all that's needed to fix the problem, negating the need for continued chiropractic care. But it's important to remember that spinal nerve root compression can exist even in the absence of clinical symptoms and without producing pain (LeFebvre et al., 2012; Marziani, 2018).

### Case Studies

1. A 14-year-old spayed female Boston terrier dog with polydipsia, constipation, widespread weakness, and a vertebral subluxation complex is managed and cared for by chiropractic adjustments.

The patient had a six-day history of polydipsia, constipation, and widespread weakness. Static and motion palpation were used in the examination. The patient also has a medical history of obesity, xerosis, and impacted anal glands. The dog was unable to walk or stand when it was brought in, and several spinal subluxations were found.

The patient underwent two visits for chiropractic evaluation and treatment with the goal of removing vertebral subluxations and regaining optimal nervous system function. The patient's ability to walk on their own improved after just one chiropractic adjustment, and right away there was a noticeable bowel movement.

For dogs with functional constipation, chiropractic care may be helpful. However, more studies assessing animal treatment plans are required to maximize the advantages of care. Chiropractic treatment was provided on a veterinarian's recommendation, and spinal adjustments were made by hand.

2. A study was conducted to assess whether a dog's tremors have subsided after receiving chiropractic therapy.

A male Great Dane puppy, three weeks old, showed up at a private veterinary and animal chiropractic facility with evidence of vertebral subluxation and orthostatic intention tremors.

A vertebral adjusting instrument was used to treat vertebral subluxations. Muscle tone, discomfort presence, and static and motion palpation were used to analyze the subluxations. The dog was put to sleep right away following low-level laser therapy and chiropractic adjustments. The dog began to exhibit noticeable improvement three days later, and the tremors

disappeared two weeks later.

Three days after starting treatment, the dog's owner reported "wonderful improvement," saying that on the second day after treatment, the dog stood up and walked twice with "very minimal shaking." (Dunwoody, 2018).

Chiropractic care was given to numerous wild animals with a range of ailments. Rabbits with constipation and decreased activity, ferrets dragging limbs, Alpacas with forelimb lameness, Green Sea Turtles with dislocated shoulders, Cheetahs with impacted anal glands (anesthesia was used during the procedure), Llamas with pelvic limb lameness, Babirusas with immune-mediated polyarthritis, Julian Pigs with aggressive behavior, Komodo dragons with forelimb lameness, reduced cervical range of motion, and cervical torticollis on radiographs are some examples. Amazon parrot from St. Vincent without the capacity to use its right pelvic limb White-tailed deer, goat breeds with osteoarthritis, a leopard that self-mutilates the distal end of its tail, and a great horned owl that is incapable of closing its fingers on one pelvic leg (Marziani, 2018).

### **Chiropractic Contraindications**

For evident pathological disorders, fractures, infections, neoplasia, metabolic issues, and non-mechanical issues, chiropractic treatment is contraindicated. Conventional veterinary treatment should be used to treat horses with medical or surgical issues; nevertheless, chiropractic care can play a significant part in rehabilitation by aiding in the restoration of normal neuromuscular and musculoskeletal function (Eschbach et al., 2008).

Within veterinary chiropractic medicine, there are a few minor contraindications, such as spinal neoplasia and pelvic or vertebral fractures. While it's not a contraindication, animals with spinal cartilage prolapses or those who have had back surgery need to be treated with competence and caution (Haq et al., 2017).

Acute episodes of pain related to osteoarthritis, impinged dorsal spinous processes, soft tissue damage, and joint hypermobility (joint subluxation and dislocation) are not recommended for chiropractic care. Cervical manipulation is not recommended in cases of spinal cord compression brought on by static or dynamic cervical lesions resulting from cervical vertebral instability. On the other hand, in the damaged spinal segments, chiropractic adjustment of the neighboring compensatory hypomobile vertebrae (VSCs) may enhance joint motion and lessen compression of the spinal cord (Eschbach et al., 2008).

### **The Future of Chiropractic**

A number of significant developments and trends that are expected to strengthen the position of chiropractors in international healthcare systems will likely influence the direction of chiropractic care in the future. Chiropractic care is anticipated to become more and more important in the management of a variety of musculoskeletal conditions as patient demand for non-invasive, holistic treatments rises. This is especially true when it comes to sports medicine, chronic pain management, and preventive healthcare.

Since its inception as a complete alternative medicine idea 120 years ago, chiropractic care has evolved to include complementary medicine and, in certain jurisdictions, primary care status. At the moment, several nations have license and registration requirements for chiropractors as well as educational programs with varying standards and focus, most of which are housed in private institutions and only a small percentage of which are financed by government universities (Walker, 2016). A clear regulations, good governance, suitable laws, and established educational standards would be necessary for the profession to advance ( Du Plessis, 2017; Bishop et al., 2019).

The future of the chiropractic profession must be mapped out using a deep and thorough analytical framework. The Six Pillars analysis is a priceless tool for delving into the intricacies of the chiropractic field and identifying potential future developments. This strategy is based on six interrelated pillars, each of which offers special perspectives and methods for navigating the chiropractic profession's future. This article provides useful insights for strategic decision-making and proactive adaptation by addressing the prospects and issues of the chiropractic profession through the use of mapping, anticipating, timing, deepening, and developing alternative pillars (Dator, 2009; LeFebvre et al., 2012; Bishop et al., 2019).

PILLAR 1 provides a basis for imagining potential opportunities and obstacles in the future by mapping the chiropractic environment and analyzing factors impacting its trajectory. In order to create future scenarios for strategic planning and shifting healthcare dynamics.

PILLAR 2 looks ahead to many future scenarios by analyzing future trends, disruptions, and paradigm shifts in the industry. In order to make sure that strategy and actions are in line to maximize effect and success.

PILLAR 3 identifies crucial transition points and the rate of change. With a focus on ongoing education, research, and professional growth.

PILLAR 4 expands the profession's knowledge and capabilities while giving healthcare professionals the tools they need to meet new challenges, spur innovation, and provide high-quality treatment.

PILLAR 5 is all about embracing new modalities and technologies, finding creative ways to adapt to evolving patient requirements, and making sure that the field is relevant and sustainable in the long run.

PILLAR 6 offers a path forward for the profession's transformation by tackling persistent problems and creating principles for evidence-based practice. Improved patient care outcomes and increased services are achieved through embracing technological advancements, addressing regulatory constraints, and improving collaboration with other providers (Dator, 2009; Cifuentes, et al., 2011).

Although the field generally produces skilled manual therapists who are decent professional citizens and contributors to their communities, there are still aberrant elements with deeply held outdated ideologies. These disorganized and lone elements have done immense harm to the profession's credibility and will keep doing so. As a result, the profession's standing is frequently bad when compared to other health professions, and public acceptance of it varies widely (Walker, 2016).

Keeping all of this in mind, how can the profession develop to establish itself as legitimate and equal stakeholders in the health sector? A career that can command the respect of patients, policymakers, and other members of the health sector? a field where it is accepted as an appropriate collaborator in the provision of healthcare services? If the chiropractors, especially the young members of the profession plan to tackle the above questions, the profession's standing will be improved to the point that people will view chiropractors and chiropractic as respectable collaborators in the delivery of healthcare. It is conceivable that this objective aligns with the hopes of our younger professionals who want to have long and honorable careers ( Cifuentes, et al., 2011; Walker, 2016).

In a quantitative analysis involving numerous chiropractic care clinics, the chiropractic profession presents itself as competent to treat a broad range of illnesses, significantly more than just the ones that are more closely related to chiropractic care (such as back pain). Evidence-based practice seemed to be valued and embraced by a large number of clinics. They did, however, also present the profession as "natural" and as upholding the principles on which it was established. These clinics appear to want to have it both ways: to maintain their status as an alternative that supports a natural approach while simultaneously presenting chiropractic as an evidence-based treatment that conforms to the norms of established science. Customers may become confused as a result of the communication surrounding chiropractic therapy being associated with two somewhat different epistemologies ( Cifuentes et al., 2011; Shelley et al., 2015).

Given the increasing acceptance of chiropractic therapy as a primary care alternative and its expanding popularity, future research should investigate the veracity of the claims from an evidence-based perspective. Even if the information that is currently available does not support most of the claims made concerning the "face" of chiropractic, a more in-depth investigation appears warranted. Future studies that look at the viewpoints of doctors or other people who recommend chiropractors could be beneficial as well ( LeFebvre et al., 2012; Shelley et al., 2015).

The following are some crucial factors that must be considered in order to legitimize the chiropractic profession:

- For chiropractors, pre-professional education needs to be improved. Universities should, if feasible, be the site of chiropractic education. It is imperative that chiropractic education incorporates meaningful hospital access or work experience, such as hospital rounds, to enable students to witness patients who are genuinely ill and to observe the signs and symptoms that are taught in theory sessions. Chiropractic students require a multidisciplinary faculty of teachers, with physicians, physiotherapists, and other allied health professionals participating in their instruction.
- Creating a progressive identity is vital. It is necessary for chiropractors to specialize in treating musculoskeletal conditions, with a focus on treating spinal pain.
- A broadened area of specialization should be developed by the profession. A special interest area in the health sciences that chiropractic as a profession may contribute to other relevant health sciences globally should also be developed. Developing and refining evidence-based treatment, enhancing bone density, providing musculoskeletal care for the elderly and ageing, and improving posture through motor control are a few potential directions. Another crucial topic to consider is implementing implementation of this science to convert research findings into practical applications.
- Exclusion of the profession's absurd components.
- Both the profession and its members should support public health.
- Professionals should encourage reputable organized components of the chiropractic profession.
- The goal of the profession ought to be to enhance clinical practice.
- Evidence-based practice should be embraced by the profession.
- Research needs to be supported by the profession.
- To bring about change, individual chiropractors must exercise personal leadership (Walker, 2016).

## Conclusion

Chiropractic care is set for even more growth and development in the future due to a growing trend of patients seeking natural drug-free types of treatments. It is for this reason that the chiropractic profession can improve its image and acceptance as well as better incorporation into present day health care: adopt emerging technologies, improve on its regulative frameworks, and improve communication and cooperation with the numerous other health care practitioners. It is noteworthy that the studied "Six Pillars" model provides chiropractors with the prospects for a strategic management of future change and development thrusts. However, as the profession changes and advances therefore it will be important to continue to remove such ideologies and adapt the public image of chiropractic care to assist in becoming a more accepted and important branch in world healthcare. Chiropractic has the potential of transforming to meet these challenges through the current crop of young chiropractors who can take the profession to even higher levels of practice.

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