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CLINICAL AND PRACTICAL INSIGHTS FROM CHINA, AN INTEGRATIVE ANALYSIS OF ACUPUNCTURE AND ACUPRESSURE PRACTICES

КЛІНІЧНІ- ПРАКТИЧНІ ДОСЛІДЖЕННЯ З КИТАЮ, ІНТЕГРАТИВНИЙ АНАЛІЗ ПРАКТИК АКУПУНКТУРИ ТА АКУПРЕСУРИ

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Анотація. Традиційна китайська медицина (ТКМ) відображає передовий та інтегративний підхід до здоров'я, який зберігався та розвивався протягом століть практики. В її основі лежить система меридіанів та стимуляція певних акупунктурних точок за допомогою акупунктури та акупресури. У цій статті розглядається клінічне застосування цих точок у зміцненні здоров'я та реабілітації, а також їх історично значуща інтеграція з китайськими бойовими мистецтвами, зокрема Він Чун. Синтезуючи історичну філософію із сучасними нейробіологічними дослідженнями, дослідження досліджує, як ті самі енергетичні шляхи, що використовуються для зцілення, використовуються в бойових мистецтвах для контролю або порушення гомеостазу супротивника. Методологія включає огляд з Китаю. Результати показують, що акупунктура ефективна в управлінні болем, нейрореабілітації та зниженні стресу, тоді як застосування точок тиску в бойових мистецтвах забезпечує фізіологічну основу для реабілітації. Це дослідження демонструє, що інтегративне розуміння енергетичних та функціональних систем організму сприяє більш ефективним терапевтичним та реабілітаційним підходам.

Ключові слова: Акупунктура, акупресура, традиційна китайська медицина Він Чун; меридіани, Ци, реабілітація, лікування болю, акупунктурні точки, бойові мистецтва.

Annotation. Traditional Chinese medicine (TCM) reflects an advanced and integrative approach to health that has endured and evolved throughout centuries of practice.

At its core lies the meridian system and the stimulation of specific acupoints through acupuncture and acupressure. This paper examines the clinical applications of these points in health promotion and rehabilitation, as well as their historically significant integration with Chinese martial arts, specifically Wing Chun. By synthesizing historical philosophy with modern neurobiological research, the study explores how the same energetic pathways used for healing are utilized in martial arts to exert control or disrupt an opponent's homeostasis. The methodology involves a review from China. Results indicate that acupuncture is effective in pain management, neuro-rehabilitation, and stress reduction, while pressure point application in martial arts provides a physiological basis for rehabilitation. This study demonstrates that an integrative understanding of the body's energetic and functional systems facilitates more effective therapeutic and rehabilitative approaches.

Key words: Acupuncture, acupressure, traditional Chinese medicine (TCM), Wing Chun; meridians, Qi, rehabilitation, pain management; acupoints, martial arts.

Introduction. Within the theoretical framework of traditional Chinese medicine, the meridian network is not merely a symbolic construct but a functional system that reflects physiological and pathological processes. The twelve primary meridians, along with the extraordinary vessels, form an interconnected web through which Qi and Blood circulate, maintaining internal balance and supporting organ function. Disruptions in this flow whether due to trauma, emotional stress, or environmental factors are believed to result in disease or dysfunction. Consequently, the stimulation of specific acupoints aims to restore harmony by regulating these energetic imbalances. In contemporary biomedical research, increasing efforts have been made to interpret these traditional concepts through scientific methodologies. Studies in neurophysiology suggest that many acupoints correspond to areas of high nerve density, connective tissue planes, or myofascial trigger points. Functional imaging techniques, such as functional magnetic resonance imaging (fMRI), have demonstrated that acupuncture stimulation can modulate brain regions associated with pain perception, emotional regulation, and autonomic control. These findings provide a plausible physiological basis for the clinical efficacy observed in acupuncture and acupressure treatments, particularly in pain management, neurological rehabilitation, and stress-related disorders.

At the same time, martial arts systems such as Wing Chun have preserved a practical and experience-based understanding of sensitive anatomical sites, many of which correspond to recognized acupoints. Within a rehabilitation context, this knowledge can be reinterpreted not as a means of harm, but as a resource for therapeutic intervention. Instead of targeting these points to disrupt function, controlled stimulation through gentle pressure, guided movement, or manual techniques can be used to restore neuromuscular balance, reduce pain, and improve proprioceptive awareness. Techniques that in martial settings involve striking or seizing are, in kinesiotherapy, adapted into safe and precise manual applications aimed at modulating muscle tone, enhancing circulation, and facilitating neural activation. Such approaches may assist in relieving tension, addressing movement dysfunctions, and supporting recovery following injury. This reinterpretation reflects a shared anatomical understanding of the body, where the same mapped points can serve both as sites of vulnerability and as opportunities for therapeutic engagement, depending on the intent and method of application. The convergence of these perspectives highlights a shared anatomical and physiological foundation underlying both healing and combat practices. It also raises important ethical and practical considerations regarding the transmission and application of such knowledge. While clinical disciplines prioritize safety, restoration, and patient well-being, martial traditions emphasize efficiency, control, and adaptability under dynamic conditions. Despite these differences, both domains rely on precise anatomical awareness, sensitivity to bodily responses, and an understanding of systemic interconnectivity.

Furthermore, the integration of these disciplines has implications for modern rehabilitation sciences. Techniques derived from martial arts such as controlled pressure application, joint manipulation, and proprioceptive training can complement conventional therapeutic interventions. When informed by TCM principles, these methods may enhance body awareness, improve

neuromuscular coordination, and accelerate recovery processes. This interdisciplinary approach supports a more comprehensive model of health, bridging traditional wisdom with contemporary clinical practice.

Accordingly, this study situates itself at the intersection of ancient theory and modern science, aiming to clarify how shared knowledge of the human body can be applied across distinct yet related fields. By examining both the therapeutic and combative uses of acupoints, our study contribute to a deeper, more integrated understanding of human physiology and its practical applications in health promotion and rehabilitation.

Aim. This paper aims to:

Systematically describe the historical and philosophical foundations of the meridian system and the concepts of Yin-Yang and Qi.

Map key acupoints utilized in acupuncture and massage therapy for health rehabilitation.

Analyze the scientific mechanisms and clinical benefits of acupoint stimulation in modern medical practice.

Investigate the anatomical and functional correspondence between acupuncture points and martial arts applications in Wing Chun, including pressure-point targeting concepts.

Evaluate safety protocols and professional guidelines for clinical and practical application.

Materials and methods. This study employed a mixed qualitative-practical research design, integrating theoretical analysis, comparative anatomical evaluation, and practice-based observational fieldwork conducted in China. The design was selected to combine classical knowledge of TCM with direct clinical observation and hands-on exposure to therapeutic and martial practices.

A key component of the study consisted of on-site observation and practical training within TCM and martial arts environments in Asia. This included:

Observation of acupuncture, acupressure, and manual therapy sessions in clinical and training settings.

Guided practical application of selected acupoint stimulation techniques under professional supervision.

Study of point localization, palpation methods, and patient response to controlled stimulation.

Exposure to applied anatomical targeting methods within Wing Chun practice, focusing on controlled and non-harmful techniques.

Field notes were recorded systematically, documenting acupoint locations, methods of stimulation, intensity, therapeutic indications, and observed physiological responses (e.g., pain modulation, muscle relaxation, local sensitivity).

To support and contextualize the practical component, a structured review of relevant literature was conducted. Sources included:

Peer-reviewed journal articles in neurophysiology, rehabilitation, and integrative medicine.

Classical TCM texts detailing meridian theory, Qi dynamics, and acupoint classification.

Modern anatomical atlases and clinical manuals on acupuncture and manual therapy.

Technical literature on Wing Chun, with emphasis on Dian Xue (Dim Mak) and anatomical targeting principles.

In addition, participation in academic conferences and symposiums contributed to the exchange of current research findings, critical discussion, and professional validation of the study's interdisciplinary approach.

These materials were used to triangulate findings from practical observations with established theoretical and scientific knowledge.

Data obtained from both literature and practical observations were analyzed using a thematic and comparative approach. The analysis focused on the following domains:

Theoretical principles of TCM (Qi, Yin-Yang, meridian systems).

Functional and anatomical properties of selected acupoints.

Neurophysiological and biomechanical effects of point stimulation.

Correspondence between therapeutic acupoints and sensitive anatomical targets identified in Wing Chun practice.

Clinical safety and applicability in rehabilitation contexts.

Comparisons were made between observed practical applications and documented scientific evidence, with particular attention to consistency in anatomical localization, reproducibility of techniques, and observed therapeutic outcomes.

A structured mapping procedure was conducted to correlate selected acupoints with modern anatomical structures. This included:

Identification of corresponding peripheral nerves, myofascial chains, and vascular structures.

Cross-referencing traditional acupuncture charts with contemporary anatomical models.

Palpatory verification of point sensitivity and tissue characteristics during practical sessions.

Additionally, anatomical targets emphasized in Wing Chun practice were compared with recognized acupoints to assess spatial overlap and functional relevance.

The study was guided by an interdisciplinary framework, integrating:

TCM theoretical constructs (meridian pathways, Qi regulation).

Biomedical perspectives (neurophysiology, pain modulation, proprioceptive mechanisms).

Functional biomechanics and applied martial arts knowledge. This approach enabled the interpretation of acupoints as both therapeutic intervention sites and functionally sensitive anatomical regions.

Although the study did not involve controlled clinical trials or invasive procedures, ethical principles were strictly observed. All practical activities were conducted under supervision and within non-invasive, therapeutic boundaries. Techniques derived from martial arts were adapted exclusively for rehabilitation and educational purposes, emphasizing patient safety, minimal force application, and professional responsibility.

Results and their discussion. The findings confirm that the theoretical foundation of acupuncture is deeply rooted in the Yin-Yang paradigm, representing a dynamic system of opposition and interdependence. Health is consistently described, both in classical literature and observed practice, as a state of functional equilibrium, while disease corresponds to disruption in the circulation of Qi (vital energy) [1]. The Huangdi Neijing systematically defines the network of twelve primary meridians linked to Zang-Fu organ systems, forming a structured model that integrates internal physiological processes with external anatomical pathways [2].

Practical observations in China demonstrated that these theoretical constructs are not treated as abstract philosophy but are actively applied in diagnostic palpation and treatment planning.

Analysis of both literature and practical application indicates that the meridian system functions as a conceptual-functional map of the human body [3], consisting of twelve primary meridians, eight extraordinary vessels, and collateral branches. Each meridian is associated with elemental correspondences and circadian activity cycles.

Empirical observation during clinical sessions showed that practitioners consistently select points based on these cyclical and systemic relationships. Modern anatomical comparison supports that many acupoints correspond to regions of increased neural, vascular, and connective tissue density, reinforcing their physiological relevance [4].

The study identified several acupoints that demonstrated consistent therapeutic application across both literature and observed practice. Notably:

• ST36 (Zusanli) was repeatedly applied for systemic strengthening, immune modulation, and gastrointestinal regulation.

• LI4 (Hegu) was frequently used for analgesic purposes, particularly in craniofacial conditions [5].

• PC6 (Neiguan) showed effectiveness in regulating cardiovascular and gastrointestinal symptoms.

• GV20 (Baihui) was applied in cases involving stress, cognitive imbalance, and postural dysfunction [6].

Observed outcomes included reduction in muscle tension, improved patient-reported comfort, and measurable relaxation responses, supporting their classification as "command points."

In Tui Na practice, acupoint mapping is adapted into a functional musculoskeletal framework, emphasizing points that directly influence muscular tension and joint mobility. Particular attention was given to the Bladder Meridian, where paraspinal "Shu" points correspond to internal organ regulation.

The GB21 (Jianjing) point was consistently utilized to relieve cervical and shoulder tension, with observable improvements in range of motion and reduction of localized pain [7]. Compared to acupuncture, acupressure demonstrated immediate mechanical effects, making it suitable for rapid therapeutic intervention.

Results indicate that while both modalities target identical anatomical points, their mechanisms and clinical applications differ. Acupuncture induces the De Qi response through needle stimulation, producing deeper neuromodulatory effects. In contrast, acupressure relies on mechanical force, offering a non-invasive alternative with broader accessibility [8].

Practical observations confirmed that acupressure is particularly effective in acute conditions and rehabilitation settings, whereas acupuncture is more frequently employed for chronic and systemic disorders.

Clinical observations align with existing research demonstrating that acupuncture contributes to rehabilitation, particularly in neurological and post-surgical recovery. Mechanistically, stimulation of acupoints appears to enhance neuroplasticity and promote the release of brain-derived neurotrophic factor (BDNF) [9, 10]. BDNF functions as a critical neurotrophic factor that supports neuronal growth, enhances synaptic plasticity, and maintains overall functional integrity of the brain.

Additionally, regular stimulation was associated with autonomic regulation, shifting patients toward parasympathetic dominance,

which supports recovery and stress reduction [11].

The results support the role of acupuncture as an effective non-pharmacological intervention for pain management. Observed analgesic effects are consistent with the Gate Control Theory, where stimulation of sensory fibers inhibits nociceptive transmission [12].

Furthermore, endogenous opioid release (endorphins and enkephalins) was reflected in patient-reported pain reduction and relaxation responses, confirming established biochemical mechanisms [13].

Practical observations confirmed that acupuncture is rarely used in isolation. Instead, it is integrated with techniques such as moxibustion and cupping to enhance therapeutic outcomes.

This multimodal approach addresses both symptomatic manifestations and underlying systemic imbalances, reflecting the TCM principle of treating both the "root" and the "branch" [14].

Correspondence with martial arts practice (Wing Chun). A significant finding of this study is the anatomical and functional overlap between acupoints and target zones used in Wing Chun. Within martial contexts, these points are applied in systems such as Dim mak and Kyusho Jitsu.

Observed and documented examples include:

• ST9 (Renying), located near the carotid sinus, capable of inducing vasovagal responses

• LI10 (Shousanli), affecting forearm neuromuscular control [15]

Training methods such as Chi Sao emphasize tactile sensitivity, allowing practitioners to detect structural weaknesses and apply targeted pressure [16]. This demonstrates that identical anatomical knowledge underlies both therapeutic and combative applications.

Martial training incorporates conditioning practices such as Qi Gong and "Iron Shirt" techniques, aimed at increasing resilience of vulnerable anatomical areas. These practices reflect an applied understanding of Qi flow and structural reinforcement [17]. From a rehabilitation perspective, these methods can be reinterpreted as proprioceptive and neuromuscular training, contributing to body awareness and injury prevention.

Modern imaging studies support the physiological basis of acupoint stimulation. Functional MRI data indicate activation of the limbic system and somatosensory cortex during treatment [18].

Additionally, studies have demonstrated reduced electrical impedance at acupoints, suggesting distinct bioelectrical properties compared to surrounding tissues [19]. These findings align with both classical descriptions and practical observations.

Observed clinical practice confirmed that acupuncture is safe when performed by trained professionals. Minor adverse effects such as bruising were occasionally noted, while serious complications remain rare and are typically associated with improper technique [20].

Strict adherence to sterile procedures and anatomical precision is essential, particularly when working near vital structures. In the context of this study, all practical applications emphasized controlled, non-invasive, and therapeutic use, especially when adapting knowledge derived from martial arts. The tabulated results and their discussion are presented in the appendix (Table 1: Analytical summary of acupoint effects, mechanisms, and evidence levels).

Conclusion. This study provides an integrated analysis of the meridian system, acupoint functionality, and their dual application in therapeutic and martial contexts. The findings demonstrate that the theoretical framework of Traditional Chinese Medicine (TCM), grounded in the principles of Qi, Yin-Yang balance, and meridian connectivity, remains functionally relevant when examined through both modern biomedical perspectives and practical clinical observation.

The combination of literature analysis and practical-based experience confirms that acupoints represent anatomically and physiologically significant sites. Their correspondence with neural pathways, myofascial structures, and vascular networks supports the hypothesis that traditional meridian maps reflect a functional organization of the human body rather than a purely symbolic system. Observed therapeutic applications, particularly in acupuncture and acupressure, indicate measurable effects in pain modulation, autonomic regulation, and neuromuscular recovery.

Furthermore, the study highlights a notable convergence between TCM and martial arts practices, particularly in systems such as Wing Chun. The overlap between acupoints and anatomically vulnerable regions used in Dim mak demonstrates a shared empirical understanding of human physiology. While the intent of application differs—therapeutic versus combative—the underlying anatomical knowledge remains consistent. This duality reinforces the concept that identical physiological structures can be engaged either to restore function or to disrupt it, depending on method and purpose. From a clinical perspective, the results support the integration of acupoint-based techniques into modern rehabilitation practices. Acupuncture and acupressure offer effective, non-pharmacological interventions for pain management, functional recovery, and stress-related conditions. Additionally, the reinterpretation of selected martial arts training principles—such as controlled pressure application and proprioceptive sensitivity—may contribute to improved neuromuscular coordination and injury prevention. At the same time, the study emphasizes the importance of safety, professional training, and ethical responsibility. Accurate anatomical knowledge and adherence to clinical standards are essential to ensure that acupoint stimulation remains both effective and safe, particularly when adapting techniques derived from martial traditions.

In conclusion, this research supports a multidisciplinary approach to understanding the human body, bridging traditional medical philosophy, modern scientific evidence, and applied physical practice. The integration of these domains offers valuable insights for both clinical rehabilitation and the broader study of human physiology, while also highlighting the need for further controlled experimental research to strengthen the evidence base and standardize methodologies.

Table

Analytical summary of acupoint effects, mechanisms, and evidence levels

Domain & Source	Intervention / Focus	Observed Effect	Mechanism	Evidence Level
TCM Theory [1,2]	Yin-Yang, Qi balance	Systemic regulation, homeostasis	Energetic equilibrium within meridians	Theoretical / Classical
Meridian System [3,4]	12 meridians, 8 vessels	Functional body connectivity	Neurovascular and fascial pathways correlation	Moderate (anatomical studies)
Key Acupoints [5,6]	ST36, LI4, PC6, GV20	Pain reduction, immune modulation, autonomic balance	Neural stimulation, circulation enhancement	Moderate-High (clinical use)
Acupressure [7]	Bladder Meridian, GB21	Muscle relaxation, improved mobility	Mechanical stimulation of myofascial tissue	Moderate (clinical observation)
Technique Comparison [8]	Acupuncture vs. acupressure	Chronic vs. acute symptom control	Needle-induced vs. mechanical neuromodulation	Moderate
Rehabilitation [9,10]	Post-stroke, post-surgical	Functional recovery, neuroplasticity	BDNF activation, neural reorganization	High (clinical studies)
Pain Management [12,13]	Acupoint stimulation	Analgesia, reduced pain perception	Gate control theory; endogenous opioids	High
TCM Integration [14]	Moxibustion, cupping	Improved circulation, systemic balance	Thermal and hemodynamic effects	Moderate
Martial Application [15,16]	Wing Chun, Dim Mak	Neuromuscular disruption, reflex inhibition	Targeting nerves, vessels reflex zones	Low-Moderate (empirical/ traditional)
Training Methods [17]	Qi Gong, Iron Shirt	Increased resilience, proprioception	Neuromuscular conditioning	Low-Moderate
Scientific Validation [18,19]	fMRI, bioelectric studies	Brain activation, point specificity	CNS modulation; electrical conductivity differences	High experimental data
Safety [20]	Acupuncture practice	Minimal adverse effects	Sterile technique, precision	High

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