

REVIEW ARTICLE

A Review Article on Taichi and Its Impact on Health

A.L. Mahalakshmi, Helen Shaji J.C

Shri Sathya Sai College of Nursing, Sri Balaji Vidyapeeth (Deemed to be University), Puducherry.

Corresponding Author: mahaprabhupm@gmail.com

Orchid id: 0000-0002-5902-8572

ABSTRACT

Tai Chi Chuan, often referred to as the "great ultimate," possesses the remarkable ability to empower those who are physically frail, uplift individuals who are ailing, restore vigor to the debilitated, and in still confidence in those who are timid. In this holistic manner, Tai Chi Chuan serves as a comprehensive practice that caters to diverse physical and mental conditions. Recent research findings underscore the varied and extensive health advantages of Tai Chi, spanning multiple health domains, such as cardiovascular health, osteoporosis, rheumatic arthritis, knee arthritis, psychoneuroimmunology, diabetes mellitus, PCOD, obesity, metabolic disorders, and functional disability. With its roots deeply embedded in ancient Chinese tradition, Tai Chi was originated by the Taoist monk Zhang during the 12th century. Notably, Tai Chi's gentle impact on muscles and joints renders it safe for individuals across all age groups. Additionally, its affordability and minimal equipment requirements make it accessible for both individual and group practice. Over time, Tai Chi has evolved into an effective strategy for managing stress and anxiety. Often described as "meditation in motion," Tai Chi fosters a sense of tranquility and inner peace. Specific Tai Chi movements are recognized for their ability to soothe emotions, enhance mental focus, and bolster the immune system. The deliberate and unhurried pace of Tai Chi promotes relaxation, proper posture, and equilibrium, contributing to a balanced state of being. The practice of Tai Chi not only contributes to maintaining youthful vitality as one ages but also makes a substantial contribution to overall health and well-being. Tai Chi seamlessly embodies both the essence of martial art and exercise. Tai Chi as exclusively one or the other would be an oversimplification. Instead, Tai Chi elegantly blends elements of exercise and martial intent. While it certainly serves as a form of exercise, it simultaneously encompasses martial objectives. Importantly, Tai Chi's historical origins underscore its martial prowess, a facet that should not be overlooked. The techniques of Tai Chi were meticulously honed in the context of life-and-death combat, an aspect that practitioners should acknowledge.

Keywords: Martial art, Stress, Anxiety, Balance & Relaxation.

Received 24.03.2024

Revised 01.05.2024

Accepted 17.06.2024

How to cite this article:

A.L. Mahalakshmi, Helen Shaji J.C. A Review Article on Taichi And Its Impact On Health. Adv. Biores., Vol 15(4) July 2024: 241-245.

INTRODUCTION

The practice of Tai Chi exercises, originating from China, involves deliberate and graceful bodily movements designed to induce relaxation of both the body and mind. Nestled within the realm of internal martial arts, Tai Chi has maintained popularity in China for centuries. Its inception is attributed to Chang San-Feng, a Taoist figure from either the Sung or Yuan dynasty. According to legend, Chang drew inspiration from a battle between a snake and a crane, observing the snake's agility and counterattacks. While the historical origins remain somewhat enigmatic, Tai Chi's contemporary significance spans health enhancement, healing, relaxation, and martial practice, extending beyond the borders of China. Tai Chi encompasses a spectrum of principles, characterized by fluid and elegant movements that coalesce to form standardized routines [1-3]. Key principles include graceful movement, focused concentration, mindful breathing, improvement of posture, heightened agility, and supple waist movements. The central role of the waist facilitates fluidity, balance, and power, serving as a conduit for vital energy (Chi) throughout the body. Translated as "Supreme Ultimate Hand Fighting," Tai Chi Chuan embodies a foundational principle of utilizing softness to overcome hardness and vice versa, evident in the interplay between the forces of yin and yang. Consequently, Tai Chi's movements redirect attacks rather than directly blocking them, aligning with its martial philosophy. Mastery demands anticipation, speed,

stability, and relaxation. The amalgamation of softness and strength, relaxation and focus, and flexibility and stability in Tai Chi mirrors the harmony of nature, captured in the saying "Be still as the mountain and flow like the great river [4-6]."

Health Benefits of Tai Chi: Tai Chi presents a myriad of advantages. Dedicated and consistent practice yields enduring benefits, including improved overall health, increased endurance, longevity, enhanced mental clarity and serenity, and augmented physical capabilities. From a health perspective, Tai Chi contributes to lowering blood pressure, alleviating stress and anxiety, enhancing balance (particularly beneficial for older individuals), promoting better sleep quality, and fortifying mental well-being [7].

Key Aspects of Tai Chi Training: The practice of Tai Chi encompasses five essential facets:

1. **Hand Form:** This sequence of fluid martial movements comprises the recognizable solo exercise that epitomizes Tai Chi. Derived from self-defense techniques, the form places emphasis on proper posture, precise body alignment, coordination, relaxation, and focused attention.
2. **Pushing Hands:** These partnered exercises embody the interplay between yin and yang forces. They cultivate essential skills for Tai Chi self-defense, encompassing footwork, balance, coordination, redirection of force, and practical application.
3. **Self Defense:** By integrating form movements with predetermined attacks, practitioners enhance their mastery of application. Varied attacks introduce spontaneity, and eventual sparring requires conditioning and fitness.
4. **Weapons Forms and Applications:** Tai Chi encompasses a range of weaponry, including the Sabre, Sword, and Spear. Each weapon involves distinct training regimens, forms, self-defense techniques, sparring, and supplementary exercises.
5. **Internal Strength:** Comprising both Yin and Yang exercises, Internal Strength enhances bodily strength, relaxation, and coordination. It constitutes a foundation for Tai Chi, encompassing both therapeutic and meditative aspects.

Tai Chi and the Elderly Population: Tai Chi holds considerable promise for older adults, transcending socioeconomic differences to promote health and well-being. Its potential benefits encompass improved balance, enhanced cardiorespiratory fitness, cognitive enrichment, increased mobility, proprioception, enhanced sleep quality, and greater muscular strength. Additionally, Tai Chi diminishes the risk of falls and nonfatal strokes, contributing to a decrease in stroke risk factors. Healthcare professionals can confidently recommend Tai Chi to older individuals, fostering holistic well-being. The multifaceted nature of Tai Chi aligns well with the nuanced challenges of aging, offering both physical and mental training, making it a valuable tool for nurturing the balance of body and mind. Given the sedentary tendencies of the elderly, initiatives to sustain fitness are imperative, with an emphasis on preserving autonomy and quality of life. Tai Chi's exercises, grounded in controlled, unhurried movements and mastery of center of gravity, foster flexibility, strength, and psychological well-being. Its accessibility and comprehensive benefits position it as an ideal option for the elderly. In conclusion, Tai Chi Chuan stands as a powerful fusion of health enhancement, well-being, and martial philosophy. Its deliberate and flowing movements encourage harmony between body and mind, while its historical martial roots enrich its significance. The therapeutic potential spanning diverse conditions underscores Tai Chi's relevance across all age groups. Particularly notable is its potential for promoting balance, strength, and psychological well-being in older individuals. As the influence of Tai Chi transcends geographical boundaries, it serves as a testament to the enduring synergy of yin and yang forces, both within martial practice and holistic wellness [8,9].

Tai Chi and Osteoporosis: Tai Chi, a traditional systematic physical practice, has gained popularity not only in China but also globally. Utilizing precise routines of physical movement, breathing techniques, and cognitive exercises, Tai Chi aims to enhance physical function and mental well-being. Over the last 25 years, Tai Chi has surged in popularity, gaining global recognition for its health benefits. In addition to pharmacological approaches, muscle strengthening, and weight-bearing exercises that improve bone and muscle strength, coordination, and balance, Tai Chi stands as a preventive measure against osteoporosis [10].

Tai Chi and Knee Osteoarthritis: Recent inquiries into osteoarthritis highlight the cognitive and physical advantages that Tai Chi Chuan bestows upon individuals grappling with knee osteoarthritis. Investigations reveal favorable results among patients with knee osteoarthritis who engage in Tai Chi Chuan. Empirical findings suggest that Tai Chi Chuan yields moderate effects on bodily functions, structures, and physical components, positively impacting activities and engagement. While mental benefits warrant further exploration, Tai Chi Chuan shows promise as a suitable therapeutic exercise for addressing knee osteoarthritis among the growing elderly population [11].

Tai Chi and Rheumatoid Arthritis: Emerging in the 13th century, Tai Chi, a traditional Chinese martial art, has evolved from a diverse spectrum of practices including art, ritual, relaxation, exercise, and self-

defense. Despite its historical roots, recent decades have witnessed scientific investigations into its potential health advantages. Tai Chi is linked to stress reduction, improved agility, balance, posture control, lower extremity strength, and acts as a countermeasure against age-related musculoskeletal decline and its associated complications. The affordability and gentle, low-impact nature of Tai Chi further contribute to its attractiveness as a health-enhancing pursuit [12].

Tai Chi and Functional Disability: Functional disability represents a prevalent concern among stroke survivors, significantly impacting their quality of life. Tai Chi (TCY), a fundamental Tai Chi form, emerges as a convenient and cost-effective therapy. Clinical trials demonstrate TCY's positive impact on stroke survivors' upper limb function and balance, essential aspects of post-stroke rehabilitation. Given the intricate nature of stroke-induced impairments, TCY's straightforward yet effective upper limb movements offer a promising avenue for augmenting functional recovery in stroke survivors.

Tai Chi and Metabolic Syndrome: Metabolic syndrome, encompassing a cluster of cardio-metabolic disturbances, poses escalated risks for type 2 diabetes and cardiovascular diseases. Tai Chi, often referred to as "meditation in motion," serves as a mind-body exercise. Embraced both in Asian communities and Western countries, Tai Chi's moderate-intensity practice holds potential for cardiometabolic health benefits. It bears particular relevance for overweight and obese individuals, aiding in the management of associated health complications [12].

Tai Chi and Diabetes Mellitus: Diabetes mellitus, characterized by chronic hyperglycemia, poses a global health challenge. Tai Chi's amalgamation of physical movement and respiration, along with its emphasis on both body and mind, situates it as an effective exercise for diabetes management. Tai Chi's potential to maintain neuroendocrine equilibrium and regulate blood glucose levels underscores its role in complementing conventional exercise approaches for type 2 diabetes patients. To summarize, Tai Chi emerges as a versatile practice with prospective benefits across various health domains. Its fusion of physical movement, relaxation, and mindfulness offers a comprehensive approach to enhancing physical and mental well-being. As ongoing research continues to unveil the therapeutic potential of Tai Chi, it underscores its relevance as a complementary practice for diverse populations grappling with a range of health challenges. Tai Chi Chuan, commonly known as Tai Chi, constitutes a traditional Chinese exercise that harmonizes the connection between the mind and body. The intensity of Tai Chi varies based on its style, posture, and duration, typically ranging from light to moderate. Current research underscores that Tai Chi augments aspects such as aerobic capacity, muscular strength, balance, and emotional well-being. Importantly, it holds notable advantages for common risk factors linked to cardiovascular diseases, encompassing hypertension, diabetes, dyslipidemia, reduced exercise capacity, endothelial dysfunction, and depression. Importantly, Tai Chi proves to be a secure and efficacious option for individuals in the process of recuperation from conditions like acute myocardial infarction, coronary artery bypass grafting, congestive heart failure, and stroke. To summarize, Tai Chi offers significant benefits for individuals grappling with cardiovascular ailments, presenting a viable alternative exercise regimen for specific patients with cardiovascular issues [13].

Tai Chi's Pertinence in Cancer Management: For managing the diverse stages and consequences of cancer, established guidelines advocate engagement in moderate to vigorous aerobic and resistance exercises. Unfortunately, not all cancer survivors can partake in higher-intensity exercises due to challenges posed by cancer treatments or concurrent health conditions. Tai Chi, a mind-body exercise operating at a light-to-moderate intensity and requiring no equipment, emerges as a more feasible option for certain cancer survivors seeking an alternative to conventional exercise programs. With roots tracing back millennia in China, Tai Chi blends philosophy, martial arts, and healing practices. Adapting over time, modern Tai Chi forms, encompassing styles such as Chen, Yang, Wu, and Sun, share foundational principles. Characterized by unhurried, fluid movements synchronized with diaphragmatic breathing, musculoskeletal stretching, focused mental engagement with movement and muscle activity, and a meditative mindset, Tai Chi training can yield advantages across various cancer-related outcomes, spanning pre-treatment and end-of-life phases [15].

Tai Chi's Role in Tackling PCOS and Obesity: Among the recommended interventions for polycystic ovary syndrome (PCOS), emerging evidence highlights the favorable effects of Tai Chi. PCOS, a prevalent endocrine disorder impacting a significant portion of reproductive-age women, encompasses both reproductive and metabolic features, with obesity exacerbating clinical manifestations. Treatment objectives encompass achieving a healthy weight, rectifying hormonal imbalances, averting future complications, and enriching quality of life. Lifestyle interventions, including dietary adjustments, behavioral modifications, and exercise, constitute crucial components of primary PCOS management. Even modest weight loss (5% to 10%) can yield considerable improvements in metabolic, reproductive, and psychological well-being. While studies indicate limited evidence regarding exercise's direct impact

on reproductive outcomes, it is acknowledged that exercise, particularly Tai Chi, can influence body composition and insulin resistance. Tai Chi, rooted in Chinese medicine and practiced since the 17th century, has garnered attention for its comprehensive health benefits and has demonstrated positive effects on chronic conditions closely linked to PCOS, including obesity, cardiovascular diseases, and type 2 diabetes [11].

Tai Chi's Implications in Psychoneuroimmunology: Psychoneuroimmunology (PNI) presents an integrative framework for mind-body practices, merging scientific exploration with holistic viewpoints. PNI provides insights into stress responses, facilitating comprehension and management of psychological and physiological reactions. Positioned as a stress management technique, Tai Chi has the potential to enhance coping skills and influence neuroendocrine and immune responses. Recent studies explore Tai Chi's potential as a stress management tool among individuals with HIV disease, with pre and post-intervention effects still being studied. Rooted in Taoist principles, Tai Chi was initially developed to tap into innate healing capacities and connections with nature. In Western practice, it functions as a moving meditation, employing breath and balanced movements to channel life force energy and restore inner equilibrium. Guided by mindfulness and equilibrium, Tai Chi cultivates self-control and empowerment. Research is expanding, indicating that Tai Chi positively impacts various physical states.

CONCLUSION

Tai Chi stands as an alternative therapy embraced globally to enhance lifestyles and address contemporary health challenges. Its role in fostering physical well-being, endurance, and overall quality of life within the general populace is evident. This review provides an in-depth comprehension of Tai Chi and its diverse health benefits.

REFERENCES

1. Yang, F. C., Desai, A. B., Esfahani, P., Sokolovskaya, T. V., & Bartlett, D. J. (2021). Effectiveness of Tai Chi for Health Promotion of Older Adults A Scoping Review of Meta-Analyses. *American journal of lifestyle medicine*, 16(6), 700–716. <https://doi.org/10.1177/15598276211001291>
2. Niño, A., Villa-Vicente, J. G., & S Collado, P. (2022). Functional Capacity of Tai Chi-Practicing Elderly People. *International journal of environmental research and public health*, 19(4), 2178. <https://doi.org/10.3390/ijerph19042178>
3. Li F, Fisher KJ, Harmer P, Shirai M. A simpler eight-form easy tai chi for elderly adults. *Journal of Aging and Physical Activity*. 2003 Apr 1;11(2):206-18.
4. Zhang YL, Chai Y, Pan XJ, Shen H, Wei X, Xie YM. Tai chi for treating osteopenia and primary osteoporosis: a meta-analysis and trial sequential analysis. *Clin Interv Aging*. 2019;14:91-104.<https://doi.org/10.2147/CIA.S187588>
5. Han A, Robinson V, Judd M, Taixiang W, Wells G, Tugwell P. Tai chi for treating rheumatoid arthritis. *Cochrane Database Syst Rev*. 2004 Jan 1;3:CD004849.
6. Luo, X. C., Zhou, J., Zhang, Y. G., Liu, Y. Y., Li, J. J., Zheng, Z., Tong, F., & Feng, F. (2020). Effects of Tai Chi Yunshou on upper limb function and balance in stroke survivors: A protocol for systematic review and meta analysis. *Medicine*, 99(29), e21040. <https://doi.org/10.1097/MD.00000000000021040>
7. Siu PM, Yu AP, Chin EC, Yu DS, Hui SS, Woo J, Fong DY, Wei GX, Irwin MR. Effects of Tai Chi or conventional exercise on central obesity in middle-aged and older adults: a three-group randomized controlled trial. *Annals of internal medicine*. 2021 Aug;174(8):1050-7.
8. Leung YL. Effects of Tai Chi Exercise for Community-dwelling Chinese Adults with Metabolic Syndrome. The Chinese University of Hong Kong (Hong Kong); 2016.
9. Chao, M., Wang, C., Dong, X., & Ding, M. (2018). The Effects of Tai Chi on Type 2 Diabetes Mellitus: A Meta-Analysis. *Journal of diabetes research*, 2018, 7350567. <https://doi.org/10.1155/2018/7350567>
10. Tai Chi Chuan Exercise for Patients with Cardiovascular Disease Ching Lan,1 Ssu- Yuan Chen,1 May-Kuen Wong,2 and Jin Shin Lai1
11. Yang, L., Winters-Stone, K., Rana, B., Cao, C., Carlson, L. E., Courneya, K. S., Friedenreich, C. M., & Schmitz, K. H. (2021). Tai Chi for cancer survivors: A systematic review toward consensus-based guidelines. *Cancer medicine*, 10(21), 7447–7456. <https://doi.org/10.1002/cam4.4273>
12. Li, Y., Peng, C., Zhang, M., Xie, L., Gao, J., Wang, Y., Gao, Y., & Hou, L. (2022). Tai Chi for Overweight/Obese Adolescents and Young Women with Polycystic Ovary Syndrome: A Randomized Controlled Pilot Trial. *Evidence-based complementary and alternative medicine: eCAM*, 2022, 4291477. <https://doi.org/10.1155/2022/4291477>
13. Li, Y., Peng, C., Cao, G. *et al.* Tai chi for overweight/obese adolescent and young women with polycystic ovary syndrome: study protocol for a randomized controlled trial. *Trials* 19, 512 (2018). <https://doi.org/10.1186/s13063-018-2893-z>
14. Robins, J. L., McCain, N. L., Gray, D. P., Elswick, R. K., Jr, Walter, J. M., & McDade, E. (2006). Research on psychoneuroimmunology: tai chi as a stress management approach for individuals with HIV disease. *Applied nursing research: ANR*, 19(1), 2–9. <https://doi.org/10.1016/j.apnr.2005.03.002>

15. Li, F., Harmer, P., Fitzgerald, K., Eckstrom, E., Stock, R., Galver, J., Maddalozzo, G., & Batya, S. S. (2012). Tai chi and postural stability in patients with Parkinson's disease. *The New England journal of medicine*, 366(6), 511–519. <https://doi.org/10.1056/NEJMoa1107911>

Copyright: © 2024 Author. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.