Mini Review

BIOMEDICAL Journal of Scientific & Technical Research

ISSN: 2574 -1241

DOI: 10.26717/BJSTR.2023.53.008452

Tai Chi, Qigong and the Treatment of Dementia

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ARTICLE INFO

Received: November 10, 2023

Published: November 15, 2023

Citation: Robert W McGee. Tai Chi, Qigong and the Treatment of Dementia. Biomed J Sci & Tech Res 53(5)-2023. BJSTR. MS.ID.008452.

ABSTRACT

Dementia includes a variety of cognitive impairments often associated with advanced aging. Individuals who have it have difficulty performing normal cognitive functions. Tai chi and qigong are forms of traditional Chinese medicine (TCM) that are being used to treat various kinds of dementia. This article summarizes some recent studies on the use of tai chi and qigong on patients suffering from dementia. Several studies have found that the use of tai chi or qigong have been significantly more beneficial in slowing down or even reversing mental decline when compared to the control group.

Keywords: Tai Chi; Qigong; Traditional Chinese Medicine; TCM; Dementia; Alzheimer's Disease; Cognitive Impairment

Abbreviations: TCM: Traditional Chinese Medicine; CDR: Clinical Dementia Rating; MoCA: Montreal Cognitive Assessment; CDR-SB: CDR-Sum of Boxes; TUG: Timed Up and Go; GDS: Geriatric Depression Scale; AMCI: Mild Cognitive Impairment; TDCS: Transcranial Direct Current Stimulation

Introduction

Tai chi [1-5] and qigong [6-71] [pronounced chee gong or chee kung] are ancient forms of traditional Chinese medicine (TCM). They are both mind-body practices that involve breathing, mindfulness, meditation and a variety of slow, gentle movements. One might reasonably say that all tai chi includes qigong when practiced correctly, but not all qigong is tai chi. Tai chi originated as a martial art, but in recent years its focus has shifted more toward health benefits. Qigong is not considered a martial art. There is no need to go into the nuances between these two tools of traditional Chinese medicine except to say that qigong is easier to learn than tai chi. Both have been effective in treating Parkinson's disease [72], cancer [73-82], cognitive impairment [83-92] and a wide range of other ailments [93-101]. The purpose of the present article is to summarize and discuss how tai chi and qigong are being used to treat patients with dementia.

Recent Studies

The internet and the PubMed [102] database were used to search for recent studies involving tai chi or qigong in the treatment of dementia. A recent study conducted in the United States [103,104] compared the effectiveness of stretching exercises (n = 106), standard tai chi (n = 107) and cognitively enhanced tai chi (n = 105) on improvement of global cognition and dual-task walking costs in 318 older adults who had self-reported memory decline and a Clinical Dementia Rating (CDR) global score of 0.5 or less at baseline. The primary measurements used were changes in Montreal Cognitive Assessment (MoCA) having a range of 0-30 and dual-task walking costs measuring the difference between single and dual-task gait speed from the baseline to 24 weeks, measured in percentages. Secondary outcomes included Trail Making Test B, Digital Span Backwards, CDR-Sum of Boxes (CDR-SB) and physical performance tests. Assessments were at 16, 24 and 48 weeks. Three hundred and four (304) of the 318 participants completed the 24-week assessment. The cognitively enhanced tai chi group outperformed the other two groups at the end of 24 weeks; the effects persisted at 48 weeks as well. The conclusion was that the cognitively enhanced group's therapy was superior to that of the other two groups. The 24-week program consisted of practicing tai chi two hours a week for the 24 weeks. The cognitively enhanced group performed the normal tai chi moves, but also uttered words and phrases while holding the various tai chi positions that were designed to improve balance and flexibility.

The tai chi enhanced group experienced three times greater improvement in cognitive skills compared to the stretching group. Li, et

al. [105] provided cognitive training for mild cognitive impairment to two groups. One of the groups also received tai chi training. In the first 12 months, the tai chi group had additional positive effects. The tai chi group received additional training after the first 12 months with the result that cognitive impairment was further delayed. Liu, et al. [106] assessed the effectiveness of tai chi improving cognitive, physical and emotional function among persons with dementia by conducting a systematic review of research on online databases. One group added tai chi to their regular exercise routine while the control group merely did exercise without the additional tai chi training. They found that tai chi improved cognitive function with people who have dementia ($p = 0.007$) but might not improve Timed Up and Go (TUG) and Geriatric Depression Scale (GDS scores. Wang, et al. [107] searched various databases and found 40 randomized control trials that concluded that tai chi and qigong can improve cognitive function in patients with neurological disorders. They concluded that tai chi and qigong were effective in improving cognition in patients with Parkinson's disease, stroke, dementia, traumatic brain injury and mild cognitive impairment. Yang, et al. [108] examined whether non-pharmaceutical multi-component exercise training that combined tai chi with aerobics and theraband therapy has a positive effect against age-related neurocognitive and physical deterioration in elderly people who have mild cognitive impairment (aMCI).

Evaluations were performed before and after 12-weeks intervention and also after 24-week follow-up. The study found that the intervention resulted in significant improvement in various neurocognitive functions, especially in memory and frontal-related cognition, as well as better performance on functional fitness, including cardiopulmonary endurance, agility and muscle strength. The beneficial effects remained after 24 weeks. The study concluded that such intervention may protect against age-related neurocognitive and physical deficits and could delay, or even reverse, the progression of MCI to dementia. Yi, et al. [109] conducted a study whereby adults over 65 either walked in an urban forest or did qigong exercises in the same forest. Both groups participated in twelve two-hour sessions over a six-week period. Neurological scores were computed for cognition, geriatric depression and quality of life. Electroencephalography, bioimpedance and heart rate variability were measured. Both groups were shown to have had distinctive neuropsychological and electrophysiological benefits as well as beneficial effects in terms of preventing dementia. The qigong group showed alleviated depression and an increased bioimpedance phase angel in the upper body. Xu, et al. [110] conducted a randomized trial to assess the effect of tai chi combined with transcranial direct current stimulation (tDCS) on the improvement of cognitive function of patients having mild cognitive impairment (MCI). The single-blind trial of 180 participants was conducted from April, 2018 to February, 2020.

Participants were divided into four groups – tai chi combined with tDCS (TCT), tai chi combined with sham tDCS(TCS), walking combined with tDCS(WAT) and walking combined with sham tDCS(WAS). Assessment for global cognitive function, attention, executive function and memory was done at baseline and after 12 weeks. The TCT group showed significantly greater improvement in MOCA scores, memory quotient scores and digit-symbol coding task reaction time compared to the other three groups ($p < 0.05$). Hsu, et al. [111] conducted a randomized controlled trial of 80 Taiwan patients having mild to moderate cognitive impairment to determine whether a three-month program using Chan-Chuang qigong would be effective in improving muscle strength, muscle endurance, exercise capacity and quality of life. The qigong group showed significant improvement over the control group in muscle strength, muscle endurance and exercise capacity after two and three months ($p < 0.05$). Physical quality of life improvement was significant for the qigong group ($p = 0.01$) but differences in mental quality of life between the two groups was not significant ($p = 0.83$).

Funding

None.

Conflict of Interest

None.

References

1. Docherty Dan (2014) The Tai Chi Bible. Buffalo NY Firefly Books.
2. Kit Wong Kiew (2001) The Complete Book of Tai Chi Chuan. Rutland VT Tuttle Publishing.
3. Liang Shou Yu, WenChing Wu (2014) Simplified Tau Chi Chuan. Wolfeboro NH YMAA Publication Center.
4. Tsao Jesse, Jason Weil (2021) Practical Tai Chi Training. San Diego Tai Chi Healthways.
5. Yang Jwing Ming (2010) Tai Chi Chuan: Classical Yang Style. Wolfeboro NH YMAA Publication Center.
6. Allen Katherine (2017) The Qigong Bible. London Godsfield Press.
7. Frantzis Bruce (2010) Dragon and Tiger Medical Qigong, Volume 1. Fairfax CA Energy Arts.
8. Frantzis Bruce (2014) Dragon and Tiger Medical Qigong Volume 2: Qi Cultivation Principles and Exercises. North Atlantic Books.
9. Jahnke Roger (1997) The Healer Within. San Francisco Harper.
10. Jahnke Roger (2002) The Healing Promise of Qi. New York Contemporary Books a division of McGraw Hill.
11. Johnson Jerry Alan (2000) Chinese Medical Qigong Therapy: A Comprehensive Clinical Guide. Pacific Grove CA International Institute of Medical Qigong.
12. Johnson Jerry Alan (2005) Chinese Medical Qigong Therapy, Vol. 1: Energetic Anatomy and Physiology. Pacific Grove CA International Institute of Medical Qigong.
13. Johnson Jerry Alan (2005) Chinese Medical Qigong Therapy, Vol. 2: Pacific Grove, CA: International Institute of Medical Qigong.
14. Johnson Jerry Alan (2002) Chinese Medical Qigong Therapy, Vol. 3: Pacific Grove, CA: International Institute of Medical Qigong.

15. Johnson Jerry Alan (2002) Chinese Medical Qigong Therapy, Vol. 4: Prescription Exercises and Meditations, Treatment of Internal Diseases, Pediatrics, Geriatrics, Gynecology, Neurology, and Energetic Psychology. Pacific Grove CA International Institute of Medical Qigong.

16. Johnson Jerry Alan (2005) Chinese Medical Qigong Therapy, Vol. 5: An Energetic Approach to Oncology. Pacific Grove CA International Institute of Medical Qigong.

17. Korahais Anthony (2022) Flowing Zen: Finding True Healing with Qigong. Flowing Zen.

18. Qigong and Energy Medicine Database.

19. The Qigong Research Society.

20. Liu Zi Jue (2007) Chinese Health Qigong Association. Beijing Foreign Languages Press.

21. Wu Qin Xi (2008) Chinese Health Qigong Association. Beijing Foreign Languages Press.

22. Ba Duan Jin (2008) Chinese Health Qigong Association. Beijing Foreign Languages Press.

23. Yi Jin Jing (2009) Chinese Health Qigong Association. Beijing Foreign Languages Press.

24. Da Wu (2014) Chinese Health Qigong Association. Beijing Foreign Languages Press.

25. Shi Er Duan Jin (2014) Chinese Health Qigong Association. Beijing Foreign Languages Press.

26. Daoyin Yangsheng Gong Shi Er Fa (2014) Chinese Health Qigong Association. Beijing Foreign Languages Press.

27. Mawanhdui Daoyin Shu (2014) Chinese Health Qigong Association. Beijing Foreign Languages Press.

28. Taiji Yangsheng Zhang (2014) Chinese Health Qigong Association. Beijing Foreign Languages Press.

29. The Flowing Zen Qigong Academy.

30. Zou L, Pan Z, Yeung A, Talwar S, Wang C, et al. (2018) A Review Study on the Beneficial Effects of Baduanjin. J Altern Complement Med 24(4): 324-335.

31. Zou L, Yeung A, Quan X, Boyden SD, Wang H (2018) A Systematic Review and Meta-Analysis of Mindfulness-Based (Baduanjin) Exercise for Alleviating Musculoskeletal Pain and Improving Sleep Quality in People with Chronic Diseases. Int J Environ Res Public Health 15(2): 206.

32. Yu L, Liu F, Nie P, Shen C, Chen J, et al. (2021) Systematic review and meta-analysis of randomized controlled trials assessing the impact of Baduanjin exercise on cognition and memory in patients with mild cognitive impairment. Clin Rehabil 35(4): 492-505.

33. Ying W, Min QW, Lei T, Na ZX, Li L, et al. (2019) The health effects of Baduanjin exercise (a type of Qigong exercise) in breast cancer survivors: A randomized, controlled, single-blinded trial. Eur J Oncol Nurs 39: 90-97.

34. Zou L, SasaKi JE, Wang H, Xiao Z, Fang Q, et al. (2017) A Systematic Review and Meta-Analysis Baduanjin Qigong for Health Benefits: Randomized Controlled Trials. Evid Based Complement Alternat Med 2017: 4548706.

35. McGee Robert W (2021) The Use of Yi Jin Jing to Treat Illness: A Summary of Three Studies. Academia Letters.

36. McGee Robert W (2022) Qigong and the Treatment of Illness: Recent Case Studies. Biomedical Journal of Scientific & Technical Research 43(1): 34250-35253.

37. McGee, Robert W (2020) Qigong: A Bibliography of Books and Other Materials, Fayetteville State University, Broadwell College of Business and Economics Studies in the Economics of Qigong No 1.

38. McGee, Robert W (2020) A Bibliography of Recent Medical Research on Qigong. Fayetteville State University Broadwell College of Business and Economics Studies in the Economics of Qigong No 2.

39. McGee, Robert W (2020) Ba Duan Jin as a Treatment for Physical Ailments: A Bibliography of Recent Medical Research, Fayetteville State University, Broadwell College of Business and Economics Studies in the Economics of Qigong No 3.

40. McGee, Robert W (2020) Wu Qin Xi as a Treatment for Physical Ailments: A Bibliography of Recent Medical Research. Fayetteville State University, Broadwell College of Business and Economics Studies in the Economics of Qigong No 4.

41. McGee, Robert W (2020) The Use of Yi Jin Jing to Treat Illness: A Summary of Three Studies, Fayetteville State University, Broadwell College of Business and Economics Studies in the Economics of Qigong No 5.

42. McGee, Robert W (2020) Qigong and the Treatment and Prevention of COVID-19, Fayetteville State University, Broadwell College of Business and Economics Studies in the Economics of Qigong No 6.

43. Zeng ZP, Liu YB, Fang J, Liu Y, Luo J, et al. (2020) Effects of Baduanjin exercise for knee osteoarthritis: A systematic review and meta-analysis. Complement Ther Med 48: 102279.

44. Liu SJ, Ren Z, Wang L, Wei GX, Zou L (2018) Mind Body (Baduanjin) Exercise Prescription for Chronic Obstructive Pulmonary Disease: A Systematic Review with Meta-Analysis. Int J Environ Res Public Health 15(9): 1830.

45. Xie Y, Guo F, Lu Y, Guo Y, Wei G, et al. (2019) A 12-week Baduanjin Qigong exercise improves symptoms of ankylosing spondylitis: A randomized controlled trial. Complement Ther Clin Pract 36: pp. 113-119.

46. Jing L, Jin Y, Zhang X, Wang F, Song Y, et al. (2018) The effect of Baduanjin qigong combined with CBT on physical fitness and psychological health of elderly housebound. Medicine (Baltimore) 97(51): e13654.

47. Fan J, Qian F, Wang Q, Chen B, Wang L (2021) Efficacy and safety of Qigong Baduanjin exercise in the treatment of depression with insomnia: A randomized controlled study protocol. Medicine (Baltimore) 100(47): e27764.

48. Cheung DST, Chau PH, Yeung WF, Deng W, Hong AWL, et al. (2021) Assessing the effect of a mind-body exercise, qigong Baduanjin, on sleep disturbance among women experiencing intimate partner violence and possible mediating factors: a randomized-controlled trial. J Clin Sleep Med 17(5): 993-1003.

49. Yu M, Li S, Li S, Li J, Xu H, et al. (2018) Baduanjin exercise for patients with ischemic heart failure on phase-II cardiac rehabilitation (BEAR trial): study protocol for a prospective randomized controlled trial. Trials 19(1): 381.

50. Cao A, Feng F, Zhang L, Zhou X (2020) Baduanjin exercise for chronic obstructive pulmonary disease: an updated systematic review and meta-analysis. Clin Rehabil 34(8): 1004-1013.

51. Cao A, Feng F, Zhang L, Zhou X (2020) Baduanjin exercise for chronic obstructive pulmonary disease: an updated systematic review and meta-analysis. Clin Rehabil 34(8): 1004-1013.

52. Mao S, Zhang X, Shao B, Hu X, Hu Y, et al. (2016) Baduanjin Exercise Prevents post-Myocardial Infarction Left Ventricular Remodeling (BE-PREMIER trial): Design and Rationale of a Pragmatic Randomized Controlled Trial. Cardiovasc Drugs Ther 30(3): 315-322.

53. Wang F, Zhang X, Tong X, Zhang M, Xing F, et al. (2021) The effects on pain,

physical function, and quality of life of quadriceps strengthening exercises combined with Baduanjin qigong in older adults with knee osteoarthritis: A quasi-experimental study. BMC Musculoskelet Disord 22(1): 313.

54. Wen L, Chen X, Cui Y, Zhang M, Bai X (2022) Effects of Baduanjin exercise in nasopharyngeal carcinoma patients after chemoradiotherapy: a randomized controlled trial. Support Care Cancer 31(1): 79.
55. Li L, Li X, Xie P, Li Y, Ma L, et al. (2021) The effect of health-care Qigong Baduanjin combined with auricular point sticking on athletes' pre-competition anxiety: A protocol for systematic review and meta-analysis. Medicine (Baltimore) 100(7): e24874.
56. Yang Y, Chen K, Tang W, Xie X, Xiao W, et al. (2020) Influence of Baduanjin on lung function, exercise capacity, and quality of life in patients with mild chronic obstructive pulmonary disease. Medicine (Baltimore) 99(37): e22134.
57. Kong L, Ren J, Fang S, He T, Zhou X, et al. (2022) Effects of traditional Chinese mind-body exercise-Baduanjin for type 2 diabetes on psychological well-being: A systematic review and meta-analysis. Front Public Health 10: 923411.
58. Ye J, Simpson MW, Liu Y, Lin W, Zhong W, et al. (2020) The Effects of Baduanjin Qigong on Postural Stability, Proprioception, and Symptoms of Patients with Knee Osteoarthritis: A Randomized Controlled Trial. Front Med (Lausanne) 6: 307.
59. Chan JS, Li A, Ng SM, Ho RT, Xu A, et al. (2017) Adiponectin Potentially Contributes to the Antidepressive Effects of Baduanjin Qigong Exercise in Women with Chronic Fatigue Syndrome-Like Illness. Cell Transplant 26(3): 493-501.
60. Dai W, Wang X, Xie R, Zhuang M, Chang X, et al. (2020) Baduanjin exercise for cervical spondylotic radiculopathy: A protocol for systematic review and meta-analysis. Medicine (Baltimore) 99(18): e0037s.
61. Fang J, Zhang L, Wu F, Ye J, Cai S, et al. (2021) The Safety of Baduanjin Exercise: A Systematic Review. Evid Based Complement Alternat Med 2021: 8867098.
62. Yuen M, Ouyang HX, Miller T, Pang MYC (2021) Baduanjin Qigong Improves Balance, Leg Strength, and Mobility in Individuals with Chronic Stroke: A Randomized Controlled Study. Neurorehabil Neural Repair 35(5): 444-456.
63. Zheng G, Chen B, Fang Q, Lin Q (2019) Baduanjin exercise intervention for community adults at risk of ischamic stroke: A randomized controlled trial. Sci Rep 9(1): 1240.
64. Tao S, Li Z (2023) Effects of qigong exercise on cardiovascular risk factors in patients with metabolic syndrome: A systematic review and meta-analysis. Front Physiol 14: 1092480.
65. Lu Y, Li J, Ni W, Li J, Song J, et al. (2023) Effectiveness of mind-body exercise via Baduanjin on physical and psychological outcomes in patients with pulmonary ground-glass nodules: A non-randomized controlled pilot study. Complement Ther Clin Pract 50: 101679.
66. Cheung DST, Deng W, Tsao SW, Ho RTH (2019) Effect of a Qigong Intervention on Telomerase Activity and Mental Health in Chinese Women Survivors of Intimate Partner Violence: A Randomized Clinical Trial. JAMA Netw Open 2(1): e186967.
67. Liu Z, Hu H, Wen X, Liu X, Xu X, et al. (2023) Baduanjin improves neck pain and functional movement in middle-aged and elderly people: A systematic review and meta-analysis of randomized controlled trials. Front Med (Lausanne) 9: 920102.
68. Dong X, Zhang R, Guo Y, Chen L, Liu Y (2020) The efficacy of Qigong exercises for post-stroke mental disorders and sleep disorders: Protocol for a systematic review and meta-analysis. Medicine (Baltimore) 99(34): e21784.
69. Lin H, Wan M, Ye Y, Zheng G (2023) Effects of Baduanjin exercise on the physical function of middle-aged and elderly people: a systematic review and meta-analysis of randomized controlled trials. BMC Complement Med Ther 23(1): 38.
70. Chan JS, Ho RT, Chung KF, Wang CW, Yao TJ, et al. (2014) Qigong exercise alleviates fatigue, anxiety, and depressive symptoms, improves sleep quality, and shortens sleep latency in persons with chronic fatigue syndrome-like illness. Evid Based Complement Alternat Med 2014: 106048.
71. Chang PS, Knobf T, Oh B, Funk M (2019) Physical and Psychological Health Outcomes of Qigong Exercise in Older Adults: A Systematic Review and Meta-Analysissss. Am J Chin Med 47(2): 301-322.
72. García Muñoz C, González García P, Casuso Holgado MJ, Martínez Calderón J, Heredia-Rizo AM (2023) Are movement-based mindful exercises (QIGONG, TAI CHI, AND YOGA) beneficial for stroke and Parkinson's disease? A scoping review. Complement Ther Med 72: 102912.
73. Xiao CM, Zhuang YC (2016) Effect of health Baduanjin Qigong for mild to moderate Parkinson's disease. Geriatr Gerontol Int 16(8): 911-919.
74. McGee Robert W (2021) Tai Chi, Qigong and the Treatment of Cancer. Biomedical Journal of Scientific & Technical Research 34(4): 173-182.
75. Deleemans JM, Mather H, Spiropoulos A, Toivonen K, Baydoun M, et al. (2023) Recent Progress in Mind-Body Therapies in Cancer Care. Curr Oncol Rep 25(4): 293-307.
76. Ying W, Min QW, Lei T, Na ZX, Li L, et al. (2019) The health effects of Baduanjin exercise (a type of Qigong exercise) in breast cancer survivors: A randomized, controlled, single-blinded trial. Eur J Oncol Nurs 39: 90-97.
77. Chen G, Lin Y, Zhao X, Pu B (2021) Effects of Baduanjin on postoperative rehabilitation of patients with breast cancer: A protocol for systematic review and meta-analysis. Medicine (Baltimore) 100(17): e25670.
78. McGee Robert W (2022) Using Tai Chi and Qigong to Treat Cancer Symptoms. Biomedical Journal of Scientific & Technical Research 45(2): 36333-36336.
79. McGee Robert W (2022) Traditional Chinese Medicine and the Treatment of Cancer. Biomedical Journal of Scientific & Technical Research 47(4): 636-639.
80. McGee Robert W (2020) Qigong and the Treatment and Prevention of Cancer. Fayetteville State University, Broadwell College of Business and Economics, Studies in the Economics of Qigong 7: 21.
81. Casuso Holgado MJ, Heredia Rizo AM, Gonzalez Garcia P, Muñoz Fernández MJ, Martinez Calderon J (2022) Mind-body practices for cancer-related symptoms management: An overview of systematic reviews including one hundred twenty-nine meta-analyses. Support Care Cancer 30(12): 10335-10357.
82. Park M, Song R, Ju K, Shin JC, Seo J, et al. (2023) Effects of Tai Chi and Qigong on cognitive and physical functions in older adults: Systematic review, meta-analysis, and meta-regression of randomized clinical trials. BMC Geriatr 23(1): 352.
83. Liu J, Yang Y, Zhu Y, Hou X, Li S, et al. (2023) Effectiveness of Baduanjin (a Type of Qigong) on Physical, Cognitive, and Mental Health Outcomes: A Comprehensive Review. Adv Mind Body Med 37(2): 9-23.
84. Wang X, Wu J, Ye M, Wang L, Zheng G (2021) Effect of Baduanjin exercise on the cognitive function of middle-aged and older adults: A systematic review and meta-analysis. Complement Ther Med 59: 102727.

85. Yu L, Liu F, Nie P, Shen C, Chen J, et al. (2021) Systematic review and meta-analysis of randomized controlled trials assessing the impact of Baduanjin exercise on cognition and memory in patients with mild cognitive impairment. Clin Rehabil 35(4): 492-505.

86. Zheng G, Zheng Y, Xiong Z, Ye B, Tao J, et al. (2018) Effect of Baduanjin exercise on cognitive function in patients with post-stroke cognitive impairment: study protocol for a randomised controlled trial. BMJ Open 8(6): e020954.

87. Zheng G, Zheng Y, Xiong Z, Ye B (2020) Effect of Baduanjin exercise on cognitive function in patients with post-stroke cognitive impairment: a randomized controlled trial. Clin Rehabil 34(8): 1028-1039.

88. Li C, Zheng D, Luo J (2021) Effects of traditional Chinese exercise on patients with cognitive impairment: A systematic review and Bayesian network meta-analysis. Nurs Open 8(5): 2208-2220.

89. Xia R, Wan M, Lin H, Qiu P, Ye Y, et al. (2020) Effects of a traditional Chinese mind-body exercise, Baduanjin, on the physical and cognitive functions in the community of older adults with cognitive frailty: Study protocol for a randomised controlled trial. BMJ Open 10(4): e034965.

90. Zheng G, Huang M, Li S, Li M, Xia R, et al. (2016) Effect of Baduanjin exercise on cognitive function in older adults with mild cognitive impairment: study protocol for a randomised controlled trial. BMJ Open 6(4): e010602.

91. McGee Robert W (2021) Ba Duan Jin and the Treatment of Illness in General, and Cognitive Impairment in Particular. Biomedical Journal of Scientific & Technical Research 40(2): 32058-32065.

92. Zheng G, Fang Q, Chen B, Yi H, Lin Q, et al. (2015) Qualitative Evaluation of Baduanjin (Traditional Chinese Qigong) on Health Promotion among an Elderly Community Population at Risk for Ischemic Stroke. Evid Based Complement Alternat Med 2015: 893215.

93. Yu J, Chun B, Lee D, Rokni L (2023) Effect of Baduanjin Exercise on Metabolic Syndrome Risk: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. Iran J Public Health 52(5): 880-891.

94. McGee Robert W (2021) Tai Chi, Qigong and the Treatment of Disease. Biomedical Journal of Scientific & Technical Research 34(2): 26627-26633.

95. McGee Robert W (2021) Tai Chi, Qigong and the Treatment of Depression and Anxiety. Biomedical Journal of Scientific & Technical Research 36(2): 28350-28354.

96. McGee Robert W (2021) Tai Chi, Qigong and the Treatment of Arthritis. Biomedical Journal of Scientific & Technical Research 37(5): 29724-29734.

97. McGee Robert W (2021) Tai Chi, Qigong and the Treatment of Hypertension. Biomedical Journal of Scientific & Technical Research 39(1): 31055-31062.

98. McGee Robert W (2022) A Suggestion for Treating Amyotrophic Lateral Sclerosis (ALS). Biomedical Journal of Scientific & Technical Research 44(4): 35627-35631.

99. McGee Robert W (2023) Recent Studies in Traditional Chinese Medicine (TCM). Biomedical Journal of Scientific & Technical Research 50(3): 41817-41820.

100. McGee Robert W (2021) Tai Chi, Qigong and Transgender Health. Fayetteville State University, Broadwell College of Business and Economics, Studies in the Economics of Tai Chi and Qigong 8.

101. Leaviss J, Davis S, Ren S, Hamilton J, Scope A, et al. (2020) Behavioural modification interventions for medically unexplained symptoms in primary care: systematic reviews and economic evaluation. Health Technol Assess 24(46): 1-490.

102. PubMed https://pubmed.ncbi.nlm.nih.gov/

103. Li F, Harmer P, Eckstrom E, Fitzgerald K, Winters-Stone K (2023) Clinical Effectiveness of Cognitively Enhanced Tai Ji Quan Training on Global Cognition and Dual-Task Performance During Walking in Older Adults with Mild Cognitive Impairment or Self-Reported Memory Concerns: A Randomized Controlled Trial. Ann Intern Med.

104. Nelson E (2023) New study shows Tai Chi could lower your risk of DEMENTIA … a week after research revealed the martial art can ease Parkinson's symptoms. Daily Mail.

105. Li B, Tang H, He G, Jin Z, He Y, et al. Tai Chi enhances cognitive training effects on delaying cognitive decline in mild cognitive impairment. Alzheimers Dement 19(1):136-149.

106. Liu DM, Wang L, Huang LJ (2023) Tai Chi Improves Cognitive Function of Dementia Patients: A Systematic Review and Meta-analysis. Altern Ther Health Med 29(1): 90-96.

107. Wang Y, Zhang Q, Li F, Li Q, Jin Y (2022) Effects of tai chi and Qigong on cognition in neurological disorders: A systematic review and meta-analysis. Geriatr Nurs 46: 166-177.

108. Yang SY, Lee HC, Huang CM, Chen JJ (2021) Efficacy of Tai Chi-Style Multi-Component Exercise on Frontal-Related Cognition and Physical Health in Elderly with Amnestic Mild Cognitive Impairment. Front Aging 2: 636390.

109. Yi J, Kim SG, Khil T, Shin M, You JH, et al. (2021) Psycho-Electrophysiological Benefits of Forest Therapies Focused on Qigong and Walking with Elderly Individuals. Int J Environ Res Public Health 18(6): 3004.

110. Xu Y, Zhu J, Liu H, Qiu Z, Wu M, et al. (2023) Effects of Tai Chi combined with tDCS on cognitive function in patients with MCI: A randomized controlled trial. Front Public Health 11: 1199246.

111. Hsu CY, Yeh ML, Liu YE (2022) Three-month Chan-Chuang qigong program improves physical performance and quality of life of patients with cognitive impairment: A randomized controlled trial. Res Nurs Health 45(3): 327-336.

ISSN: 2574-1241

DOI: 10.26717/BJSTR.2023.53.008452

Robert W McGee. Biomed J Sci & Tech Res

Submission Link: https://biomedres.us/submit-manuscript.php