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Health benefits of qigong or tai chi for cancer patients: a systematic review and meta-analyses



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KEYWORDS

Qigong; Tai chi; Exercise intervention; Cancer patients; Meta-analysis

Summary

Background: Cancer is a leading cause of death worldwide. Mind-body interventions are widely used by cancer patients to reduce symptoms and cope better with disease- and treatment-related symptoms. In the last decade, many clinical controlled trials of qigong/tai chi as a cancer treatment have emerged. This study aimed to quantitatively evaluate the effects of qigong/tai chi on the health-related outcomes of cancer patients.

Methods: Five databases (Medline, CINAHL, Scopus, the Cochrane Library, and the CAJ Full-text Database) were searched until June 30, 2013. Randomized controlled trials (RCTs) of qigong/tai chi as a treatment intervention for cancer patients were considered for inclusion. The primary outcome for this review was changes in quality of life (QOL) and other physical and psychological effects in cancer patients. The secondary outcome for this review was adverse events of the qigong/tai chi intervention.

Results: A total of 13 RCTs with 592 subjects were included in this review. Nine RCTs involving 499 subjects provided enough data to generate pooled estimates of effect size for health-related outcomes. For cancer-specific QOL, the pooled weighted mean difference (WMD) was 7.99 [95% confidence interval (CI): 4.07, 11.91; Z score = 4.00, p < 0.0001]. The standardized mean differences (SMDs) for changes in depression and anxiety score were -0.69 (95% CI: -1.51, 0.14; Z score = 1.64, p = 0.10), and -0.93 (95% CI: -1.80, -0.06; Z score = 2.09, p = 0.04), respectively. The WMDs for changes in body mass index and body composition from baseline to 12 weeks follow-up were -1.66 (95% CI: -3.51, 0.19; Z score = 1.76, p = 0.08), and -0.67 (95% CI: -2.43, 1.09; Z score = 0.75, D = 0.45) respectively. The SMD for changes in the cortisol level was -0.37 (95% CI: -0.74, -0.00; Z score = 1.97, D = 0.05).

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Conclusion: This study found that qigong/tai chi had positive effects on the cancer-specific QOL, fatigue, immune function and cortisol level of cancer patients. However, these findings need to be interpreted cautiously due to the limited number of studies identified and high risk of bias in included trials. Further rigorous trials are needed to explore possible therapeutic effects of qigong/tai chi on cancer patients.

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Introduction

Cancer is a leading cause of death worldwide. Due to advances in medical technology and cancer treatment, the prognosis associated with cancer has improved markedly. The 5-year relative survival rate of all cancer sites is 65.8%.² Diagnosis and treatment of cancer represent a major lifetime stressor for any patient, posing both physical and psychological threats to the patient.^{3,4} The emotional distress of cancer diagnosis and the persistent side-effects of treatment also significantly compromise patients' quality of life (QOL). 5 Growing evidence suggests that mind-body techniques are beneficial adjuncts to cancer treatment and may be effective in addressing the multifaceted needs of patients with cancer. 6,7 Mind-body interventions are widely used by cancer patients to reduce symptoms and cope better with disease- and treatment-related symptoms. Mind-body treatments evaluated for their utility in oncology included gigong and tai chi.6

Qigong and tai chi were originally developed in China based on theoretical principles that are inherent to traditional Chinese medicine.^{8,9} They are practiced as mind-body

therapy or exercise, which involves a range of specifically and gently physical movements, and incorporates the purposeful regulation of both breath and mind in coordination with the regulation of the body. 7,10 Practicing qigong/tai chi simultaneously trains the mind, body, and qi (vital energy) for the benefits of physical, psychological and spiritual health.^{7,11} Globally, qigong and tai chi are practiced in a variety of modern and traditional forms. 12 Despite variation among the myriad styles, qigong and tai chi are healthoriented and emphasize the same principles and practice elements. 11 There is one difference between gigong and tai chi that "traditional tai chi is typically performed as a highly choreographed, lengthy, and complex series of movements, while health enhancement qigong is typically a simpler, easy to learn, more repetitive practice". 11 However, tai chi incorporate many movements that are similar to gigong exercise, and the longer forms of tai chi include qigong exercises as a warm up. 11 Due to sharing the same basic principles of the regulation of body focus, breath focus and mind focus by practicing qigong or tai chi, 11 the research literatures for these two forms of mind-body interventions could be considered as one body of evidence in the health promotion and wellness context.

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