Tai Chi, Qigong and the Treatment of Depression and Anxiety

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Abstract

Qigong exercises are gentle exercises that have been a part of traditional Chinese medicine [TCM] for thousands of years. Tai chi is a series of gentle movements that improve balance, strength, flexibility and overall health. It incorporates qigong principles and is also a form of TCM. The present study summarizes the results of recent studies on the effect of qigong and tai chi on the treatment of depression.

Keywords: Depression; Anxiety; Qigong; Tai Chi; Taiji; Traditional Chinese Medicine; TCM; Baduanjin

Introduction

Qigong exercises have been a part of traditional Chinese medicine [TCM] for thousands of years [1,2]. They can be practiced individually or as a set of structured exercises as part of a health or fitness program. There are thousands of individual qigong exercises. Some of them are of a general nature, aimed at improving overall health, while others are of particular benefit to a certain organ or part of the body. Perhaps the most popular set of qigong exercises, both from a medical treatment perspective and as part of a general health regimen, is baduanjin, which consists of a series of eight exercises that improve general health while also stimulating all the major body organs and fascia [3-6]. It takes about 10-15 minutes to perform, depending on the speed and number of repetitions the individual chooses.

Several other sets of qigong exercises have become popular in recent years, both from a medical perspective and as part of a general health exercise program. As of this writing, the Chinese Health Qigong Association has published 9 DVD sets and instructional manuals that have been used by medical professionals as well as individuals to improve their health and the health of their patients [4,7-14]. Other publications have also discussed these series of exercises [15-20], as well as other qigong sets and the general theory of qigong [21-53]. Qigong is generally considered to be a subset of tai chi, although some scholars consider the two to be close cousins. Qigong is incorporated into the tai chi movements, but tai chi involves more than just qigong. Tai chi, also called taiji or taijiquan [54], is also a martial art, a gentle exercise routine, and an art as well as a sport. Both tai chi and qigong are forms of moving meditation. Although they are usually done from a standing position, certain routines and exercises can be performed from a seated position. Several styles of tai chi have evolved over the centuries, but the various styles have much in common. From a health perspective, the main styles all produce similar benefits because they all cause qi (pronounced chee) to flow and they all increase flexibility and strength.

Chen style tai chi is the oldest of the main styles. It originated in the Chen Village, China, probably in the thirteenth century [55]. The founder of the Yang style of tai chi was Yang Luchan, who studied the Chen style starting around 1820. He later became a teacher and is recognized as the founder of the Yang style, which is the most widely practiced style of tai chi today [56]. Sun-style tai chi is the youngest of the major styles of tai chi. It was founded by Sun Lutang around 1900 [57]. It is known for its high stances, which makes it suitable for elderly people who have balance issues.
When tai chi is used as a tool of TCM, the Yang style is often chosen because it is gentler than the Chen style. The most universally practiced Yang-style form is the Yang-24, which consists of 24 different movements, some of which are repeated. It takes about 5-9 minutes to complete, depending on the speed with which the moves are done [58-60]. There are other Yang-style forms [61], most of which are longer than the Yang-24. Those forms are generally performed by practitioners as an art form, and in competitions, although it should be mentioned that the Yang-24 is also performed in competitions. Dr. Paul Lam has developed a set of Sun-style movements to aid in the treatment of arthritis [62,63], although the same sequence of moves can also be used to treat other ailments. Although there are Sun-style forms that are used in competitions, the Sun style is not as popular as some other styles.

Tai chi and qigong have been used to treat and even prevent a wide range of ailments over the centuries [3,21-23]. The present article focuses on the use of tai chi and qigong to treat depression. In many cases, tai chi and/or qigong are used to treat other ailments, and one of the side benefits has been to reduce depression in patients who are suffering from depression as a result of those other ailments. In other words, many TCM practitioners do not prescribe the use of tai chi or qigong specifically for the treatment of depression (although they can). They prescribe their use for the treatment of other ailments, and have found that the patient’s depression is reduced or eliminated as a result of practicing tai chi and/or qigong.

Methodology

The PubMed.gov database was used to find studies on tai chi, qigong and the treatment of depression [64].

Findings

A number of studies have found that the practice of tai chi and/or qigong have had a beneficial effect on patients who suffer from depression. Li et al. [65] examined the effect that mind-body exercises had on the mental health of patients suffering from Chronic Obstructive Pulmonary Disease (COPD). They examined the results of 13 randomized control trials (RCT) published between January, 1982 and June, 2019, which they used for meta-analysis. Those 13 studies used a variety of qigong and tai chi exercises, including baduanjin, wiqinxi, liuzijue, and both Yang and Sun style tai chi.

They found that mind-body exercises (tai chi, qigong and yoga) had significant benefits for COPD patients with anxiety (p = 0.04) and depression (p = 0.000). Sub-group analysis found that 30-60 minutes of exercise for 24 weeks of health qigong or yoga had a significant effect on anxiety for those over 70 who had COPD for more than 10 years, and that health qigong sessions of 30-60 minutes, 2-3 times a week had a significant effect for patients suffering from depression who were over 70 years old and who had COPD for less than 10 years. They also found that the beneficial effects on long-term sufferers from COPD were less than those experienced by short-term sufferers of COPD.

Zou et al. [66] examined the results of randomized control trials (RCT) published between January, 1982 and October, 2017 for studies of the effect of baduanjin on depression and anxiety. Their focus was the effect on baduanjin on individuals with physical or mental illnesses. They found that the practice of baduanjin resulted in a significant decline in anxiety (p < 0.001) and depression (p < 0.001). Giménez-Meseguer et al. [67] reviewed studies on the effect of physical exercise and various mindfulness exercises on depression, anxiety and stress in patients with substance abuse problems. They found that physical exercise produced significantly better results when it came to stress reduction, but that tai chi and qigong produced significantly better results for reduction of depression and anxiety.

Many studies have found that the practice of qigong can have a positive effect on the reduction of depression. However, its underlying mechanism remains poorly understood. So et al. [68] conducted a study to systematically review and meta-analyze the existing literature on the use of qigong to reduce depression. They identified nine studies that covered both neurophysiological and psychological mechanisms. Five of the studies concluded that qigong was effective in reducing depression (p < 0.05), while four studies found no significant change. However, two studies were excluded in the meta-analysis due to insufficient information on the depression scores, and one of the insignificant studies had a p value of 0.053, which indicates significance at the 10 percent level. They also found a significant effect on reducing diastolic blood pressure in some cases (p < 0.05), while the effect on cortisol levels and systolic blood pressure were not significant. Their review concluded that qigong was effective in reducing depression through activating the parasympathetic nervous system.

Various qigong exercise sets were used in the studies they reviewed. Baduanjin was used in two of the studies, whereas seven other studies used seven different qigong sets – Yi Jin Ten-Section Brocades, Tai chi, Chan Ming Gong, self-healing qigong, Guolin New Qigong, Guolin Qigong, and Laughing Qigong. Liu et al. [69] studied the effects of tai chi on heart rate variability (HRV) in individuals age 60 or older with depression in Shanghai, China. Their study included 60 elderly individuals with depression scores of 10 or more on the Geriatric Depression Scale (GDS), who were randomly assigned to two groups of 30 each. Individuals in the experimental group practiced tai chi for 60 minutes, three times a week for 24 weeks. Those in the control group maintained their regular lifestyle. The experimental group practiced the Yang-24 form first, then progressed to the more complicated Yang-42 form after they had mastered the Yang-24 form.
After 24 weeks, the tai chi group had significantly better scores for depression, and also had significantly better mean heart rate, RMSSD, HF, LFnorm and HFnorm scores (p < 0.05). These differences were not present in the control group. The researchers concluded that tai chi can be effective in reducing depression in older individuals. Zou et al. [70] studied the effects of meditative movements (tai chi, qigong and yoga) on major depressive disorder (MDD). They examined the meta-analysis of 15 randomized controlled trials (RCT) that used tai chi, qigong or yoga as intervention for MDD. Ethnicities varied, as did duration (4-12 weeks), session length (20-210 minutes) and the number of sessions per week (1 to 6).

They found that meditative movement had a significant effect on depression severity (p < 0.001) and anxiety severity (p < 0.001). The use of meditative movement interventions resulted in significantly improved treatment remission rate (p < 0.001) over passive controls. The study concluded that meditative movements for the treatment of MDD may provide a useful alternative to existing mainstream treatments such as drug therapy and psychotherapy. Osypuk et al. [71] explored the hypothesis that body postures in tai chi, qigong and related mind-body practices might be a biological factor that contributes to improvements in psychological well-being, the underlying premise being that posture affects mood. They found various studies that concluded that standing upright resulted in a better mood than being slumped over. The authors suggested an experimental approach to verifying their hypothesis.

Liu et al. [72] found that the practice of the Yang-24 tai chi form improved anxiety and depression and upregulates miR-17-92 in coronary heart disease patients after percutaneous coronary intervention. The tai chi group practiced tai chi over an average of 10 months. At the end of that time, the changes in their anxiety subscale were significant (p = 0.002), as were the changes in their depression subscale (p = 0.008). Luberto et al. [73] found that the practice of tai chi by patients with heart failure improved their depression symptoms and quality of life indexes. Lopez et al. [74] found that group tai chi and qigong classes taken by cancer patients and caregivers experienced significant improvement in global distress. Zhang et al. [75] performed a meta-analysis and evaluation of tai chi chuan on anxiety and depression on 14 experimental studies. They found that depression and anxiety were significantly reduced in both the younger and older adult groups, but that older adults benefitted more from tai chi than did younger adults.

Kong et al. [76] summarized a number of clinical trials that implemented tai chi as a treatment for depression. Their basic finding was that the practice of tai chi can relieve symptoms of depression. They also point out that the complexity of some tai chi movements might have an adverse effect on clinical use and suggest a simplified version might be more beneficial. They mention the Yang-8 form as one possibility. Its movements are easier to perform than some of the movements in the Yang-24 form, and the 8-form does not take as long to complete as the 24-form. They also suggest customizing a tai chi regimen to fit different maladies, since different tai chi movements have differential effects on the various body organs. A regimen that might be appropriate for depression, for example, might be suboptimum for the treatment of certain other ailments.

Zhu et al. [77] examined the long-term effects of tai chi intervention on sleep and the mental health of females having dependence on amphetamine-type stimulants (ATS). The tai chi form used in their study was the Yang-24. Each session began with a 10-minute warmup, followed by 40 minutes of tai chi exercise, and ending with a 10-minute cooldown. They found that the practice of tai chi had positive effects on the quality of sleep, fitness and depression. They suggest that the practice of tai chi might be an inexpensive and potential supplementary treatment for ATS-dependent individuals. These studies all seem to indicate that the practice of some form of tai chi or qigong can be beneficial in the treatment of depression and anxiety. Although the Yang-24 tai chi form and the baduanjin qigong set seem to be the most frequently used forms used in these studies, they are not the only forms. Regardless of which set of forms is chosen, qi (energy) is generated and assists in the alleviation of anxiety and depression.

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