

Commentary

The Role of Yoga as a Complementary Therapy in the Treatment of Various Diseases

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Yoga has been considered as a safe exercise, although a number of yoga practitioners were noted to have some unpleasant experience with yoga [1]. However, the yoga practitioners in this study were noted to be in poor physical condition or had chronic disease. They reported that the yoga classes were stressful in terms of physical and mental. The adverse incidents were primarily among elderly practitioners and those with chronic musculoskeletal disease. Against in a meta-analysis suggested that yoga was as safe as exercise and usual care [2]. The reasons given for yoga were increasing energy, enhancing immune function and health and disease prevention. The major conditions included back pain, arthritis and stress. In this survey, the yoga practitioners were primarily female, young, non-hispanic white, college-educated, living in the west and in excellent health [3]. Again, in a systematic review of the literature on yoga practice, women were noted to be the most common practitioners and yoga was being practiced primarily for distress and physical problems as well as for better health [4]. The following are examples of the benefits of yoga have been shown in various conditions.

Yoga and Posttraumatic Stress Disorder (PTSD)

PTSD is a more serious form of stress most frequently noted in military veterans. In a study on yoga with military service personnel, the yoga group experienced a significantly greater reduction in PTSD symptoms [5]. Anxiety and panic disorder have been similarly decreased by yoga [6,7]. This was accompanied by decreased heart rate and systolic blood pressure.

Yoga and blood pressure

Studies showed a significantly greater reduction in systolic and diastolic blood pressure as compared to pharmacotherapy, no treatment or usual care [8]. The average of 10 mmHg reduction in systolic blood pressure and 8 mm Hg in diastolic blood pressure has been attributed to increased parasympathetic activity and decreased sympathetic activity by increased GABA activity, counteracting the excessive activity of the sympathetic nervous system that has been associated with hypertension [9].

Yoga and pain reduction

Recent research on pain reduction following yoga includes

studies on arthritis, headaches, pre-menstrual syndrome, lower back pain and potential mechanisms underlying the relationship between yoga and pain reduction [10]. In a study on migraine headaches, a medication group was compared to a medication plus yoga group who received 12 weeks of yoga training [11]. The yoga group experienced a significant reduction in headache frequency and severity. In another study, conventional care was compared to conventional care plus yoga with yoga practice sessions occurring five days a week for six weeks [12]. Headache frequency and intensity were reduced to a greater degree in the yoga group and an increase in vagal tone along with reduced sympathetic activity was also noted in the yoga group. In a study on chronic low back pain, an Iyengar yoga group was compared to a conventional exercise group [13]. Both groups showed significant reductions in pain and improvement in quality of life measures, although the yoga group surprisingly showed almost twice the reduction in pain as compared to the exercise group.

Yoga and auto-immune conditions

Yoga has been used as a complementary treatment for several auto-immune diseases. These auto-immune conditions include asthma, chronic obstructive pulmonary disease, type II diabetes, multiple sclerosis, irritable bowel syndrome and chronic fatigue syndrome. Typically, Forced Vital Capacity (FVC), Peak Expiratory Flow Rate (PEFR) and Forced Expiratory Volume (FEV) have increased in the asthma [14]. In a systematic review and Meta analysis study, asthma symptoms, PEFR and FVC improved for the yoga groups as compared with usual care. When yoga was compared with psychological interventions, there was a greater PEFR increase for the yoga group [15]. In a study on Chronic Obstructive Pulmonary Disease (COPD), suggested that yoga improved lung function and exercise capacity on this patients [16]. Also, many yoga studies have been done in patients with type II diabetes mellitus. Typically, the fasting and postprandial blood sugars have decreased following yoga. For example, in one study fasting and postprandial blood sugar decreased in both type II diabetes and normal volunteers after six months of yoga training [17]. It showed a decrease in fasting and postprandial blood sugar as early as eight weeks of yoga [18]. Also, studies suggested improved glycemic control, lipid levels, oxidative stress, blood pressure and pulmonary and autonomic function [19]. In addition there was a reduced need for medication and improved mood and sleep. Several studies have been conducted with multiple sclerosis. For example, after 12 weeks of biweekly yoga, significant improvement was noted in fatigue, balance, step length and walking speed [20].

Yoga and Irritable Bowel Syndrome (IBS)

IBS is the most common gastrointestinal disorder. The yoga had a significant reduction in symptoms of bowel syndrome including pain, constipation and nausea that the symptom reduction was maintained at the two month follow-up assessment [21]. In a comparison between

16-biweekly sessions of yoga and walking, positive effects were noted for both groups [22]. Irritable bowel syndrome severity symptoms decreased for the yoga group, while overall G.I. symptoms decreased for the walking group.

Yoga and chronic fatigue syndrome

Yoga has also been effective for patients with chronic fatigue syndrome [23]. In this study, fatigue scores decreased for the yoga versus the control group following biweekly sessions with the yoga instructor as well as daily in-home sessions for approximately two months.

Yoga and HIV

In one study on HIV patients, the yoga group experienced a significant decrease in depression scores and a significant increase in CD4 cell counts. In contrast, the control group experienced increased depression scores and decreased CD4 cell counts [24].

Yoga and pediatric cancer

In the recent study on pediatric cancer, the recruitment, retention and attendance rates were good for a 12 week yoga program [25]. The children showed an increase in quality of life, functional mobility, hamstring flexibility and physical activity levels at the end of the program.

Yoga and aging problems

Yoga has also been assessed for several aging problems including balance, mobility and sleep quality. The most common aging conditions have also been studied for yoga effects including osteoporosis, Parkinson's and pulmonary disease. In one study, yoga was assessed for postural control, mobility, and gait speed following a 12 -week yoga class [26]. By the end of the 12 -week intervention, improvements were seen in mobility, postural control and gait speed. Several studies have been conducted on balance in older adults, as the fear of falling and balance problems are prevalent in that age group. In one study individuals were randomly assigned to yoga practice sessions or a control group that received no intervention [27]. The yoga group performed better on the fall and on the balance scale. Also, in another studies, yoga was effective in improving balance and postural stability [28-30]. In a study on sleep quality, older adults with insomnia who engaged in yoga classes for 12 weeks had better sleep quality, sleep efficiency, sleep latency and duration than an inactive control group [31]. In addition, their depression, anxiety, stress and anger scores were reduced. Also, studies on yoga for osteoporosis have suggested increased bone absorption based on x-ray absorptiometry (DEXA scan) [32].

Conclusion

It seems that yoga has a positive role as a complementary therapy in treatment of different diseases. However, further studies need to be done in this area.

References

- Matsushita T, Oka T. A large-scale survey of adverse events experienced in yoga classes. *Biopsychosoc Med*. 2015; 18: 9.
- Cramer H, Ward L, Saper R, Fishbein D, Dobos G, Lauche R. The safety of yoga: a systematic review and meta-analysis of randomized controlled trials. *Am J Epidemiol*. 2015; 182: 281-293.
- Cramer H, Ward L, Steel A, Lauche R, Dobos G, Zhang Y. Prevalence, patterns, and predictors of yoga use: results of a U.S. nationally representative survey. *Am J Prev Med*. 2016; 50: 230-235.
- Park CL, Braun T, Siegel T. Who practices yoga? A systematic review of demographic, health-related, and psychosocial factors associated with yoga practice. *J Behav Med*. 2015; 38: 460-471.
- Johnston JM, Minami T, Greenwald D, Li C, Reinhardt K, Khalsa SB. Yoga for military service personnel with PTSD: a single arm study. *Psychol Trauma*. 2015; 7: 555-562.
- Mullur LM, Khodnapur JP, Bagali S, Aithala M, Dhanakshirur GB. Role of yoga in modifying anxiety level in women. *Indian J Physiol Pharmacol*. 2014; 58: 92-95.
- Vorkapic CF, Range B. Reducing the symptomatology of panic disorder: the effects of a yoga program alone and in combination with cognitive behavioral therapy. *Front Psychiat*. 2014; 5: 177.
- Posadzki P, Cramer H, Kuzdzal A, Lee MS, Ernst E. Yoga for hypertension: a systematic review of randomized clinical trials. *Complement Ther Med*. 2014; 22: 511-522.
- Cramer H. The efficacy and safety of yoga in managing hypertension. *Exp Clin Endocrinol Diabetes*. 2016; 124: 65-70.
- Field T. Yoga clinical research review. *Complement Ther Clin Pract*. 2011; 17: 1-8.
- Boroujeni MZ, Marandi SM, Esfarjani F, Sattar M, Shaygannejad V, Javanmard SH. Yoga intervention on blood NO in female migraineurs. *Adv Biomed Res*. 2015; 4: 259.
- Kisan R, Sujjan M, Adoor M, Rao R, Nalini A, Kutty BM, et al. Effect of yoga on migraine: a comprehensive study using clinical profile and cardiac autonomic functions. *Int J Yoga*. 2014; 7: 126-132.
- Nambi GS, Inbasekaran D, Khuman R, Devi S, Shanmuganathan, Jagannathan K. Changes in pain intensity and health related quality of life with Iyengar yoga in nonspecific chronic low back pain: a randomized controlled study. *Int J Yoga*. 2014; 7: 48-53.
- Rao YC, Kadam A, Jagannathan A, Babina N, Rao R, Nagendra HR. Efficacy of naturopathy and yoga in bronchial asthma. *Indian J Physiol Pharmacol*. 2014; 58: 233-239.
- Cramer H, Posadzki P, Dobos G, Langhorst J. Yoga for asthma: a systematic review and meta-analysis. *Ann Allergy Asthma Immunol*. 2014; 112: 503-510.
- Liu XC, Pan L, Hu Q, Dong WP, Yan JH, Dong L. Effects of yoga training in patients with chronic obstructive pulmonary disease: a systematic review and meta-analysis. *J Thorac Dis*. 2014; 6: 795-802.
- Chimkode SM, Kumaran SD, Kanhere VV, Shivanna R. Effect of yoga on blood glucose levels in patients with type 2 diabetes mellitus. *Clin J Diagn Res*. 2015; 9: 1-3.
- McDermott KA, Rao MR, Nagarathna R, Murphy EJ, Burke A, Nagendra RH, et al. A yoga intervention for type 2 diabetes risk reduction: a pilot randomized controlled trial. *BMC Complement Altern Med*. 2014; 14: 212.
- Innes KE, Selfe TK. Yoga for adults with type 2 diabetes: a systematic review of controlled trials. *J Diabetes Res*. 2016; 2016: 6979370.
- Guner S, Inanici F. Yoga therapy and ambulatory multiple sclerosis assessment of gait analysis parameters, fatigue and balance. *J Bodyw Mov Ther*. 2015; 19: 72-81.
- Evans S, Lung KC, Seidman LC, Sternlieb B, Zeltzer LK, Tsao JC. Iyengar yoga for adolescents and young adults with irritable bowel syndrome. *J Pediatr Gastroenterol Nutr*. 2014; 59: 244-253.
- Shahabi L, Naliboff BD, Shapiro D. Self-regulation evaluation of therapeutic yoga and walking for patients with irritable bowel syndrome: a pilot study. *Psychol Health Med*. 2016; 21: 176-188.
- Oka T, Tanahashi T, Chijiwa T, Lkhagvasuren B, Sudo N, Oka K. Isometric yoga improves the fatigue and pain of patients with chronic fatigue syndrome who are resistant to conventional therapy: a randomized, controlled trial. *Biopsychosoc Med*. 2014; 8: 27.

24. Naoroibam R, Metri KG, Bhargav H, Nagaratna R, Nagendra HR. Effect of Integrated Yoga (IY) on psychological states and CD4 counts of HIV-1 infected patients: a randomized controlled pilot study. *Int J Yoga*. 2016; 9: 57-61.
25. Wurz A, Chamorro-Vina C, Guilcher GM, Schulte F, Culos-Reed SN. The feasibility and benefits of a 12-week yoga intervention for pediatric cancer out-patients. *Pediatr Blood Cancer*. 2014; 61: 1828-1834.
26. Kelley KK, Aaron D, Hynds K, Machado E, Wolff M. The effects of a therapeutic yoga program on postural control, mobility, and gait speed in community-dwelling older adults. *J Altern Complement Med*. 2014; 20: 949-954.
27. Nick N, Petramfar P, Ghodsbin F, Keshavarzi S, Jahanbin I. The effect of yoga on balance and fear of falling in older adults. *PMR*. 2016; 8: 145-151.
28. Saravanakumar P, Higgins IJ, Van der Riet PJ, Marquez J, Sibbritt D. The influence of tai chi and yoga on balance and falls in a residential care setting: a randomized controlled trial. *Contemp Nurse*. 2014; 48: 76-87.
29. Jeter PE, Nkodo AF, Moonaz SH, Dagnelle G. A systematic review of yoga for balance in a healthy population. *J Altern Complement Med*. 2014; 20: 221-232.
30. Youkana S, Dean CM, Wolff M, Sherrington C, Tiedemann A. Yoga-based exercise improves balance and mobility in people aged 60 and over: a systematic review and meta-analysis. *Age Ageing*. 2016; 45: 21-29.
31. Halpern J, Cohen M, Kennedy G, Reece J, Cahan C, Baharav A. Yoga for improving sleep quality and quality of life for older adults. *Altern Ther Health Med*. 2014; 20: 37-46.
32. Motorwala ZS, Kolke S, Panchal PY, Bedekar NS, Sancheti PK, Shyam A. Effects of yogasanas on osteoporosis in postmenopausal women. *Int J Yoga*. 2016; 9: 44-48.