GAVIN PUBLISHERS

Journal of Yoga, Physical Therapy and Rehabilitation

Short Communication

Berber H, et al. Yoga Phys Ther Rehabil: YPTR-150.

DOI: 10.29011/YPTR-150. 000050

Efficacy of Yoga in Dorsal Pain

H. Berber, A. Dag, E. Kara, H. Uslu, B. Kuran*, M. Unal, E. Bilen

Department of Physical Therapy and Rehabilitation, University of Istanbul Yeni Yuzyil, Turkey

***Corresponding author:** B. Kuran, Department of Physical Therapy and Rehabilitation, University of Istanbul Yeni Yuzyil, Turkey. Email: banukuran@gmail.com

Citation: Berber H, Dag A, Kara E, Uslu H, Kuran B, et al. (2018) Efficacy of Yoga in Dorsal Pain. Yoga Phys Ther Rehabil: YPTR-150. DOI: 10.29011/YPTR-150. 000050

Received Date: 22 December, 2017; **Accepted Date:** 02 February, 2018; **Published Date:** 12 February, 2018

Communication

Yoga which means yoke or join together in Sanskrit language, is an ancient mind-body exercise which improves flexibility balance, vertebral column alignment, posture and strength. Yoga postures have been written by Patanjali, an Indian scholar and physician in 3000 BC [1]. Yoga combines stretching exercise and different poses with deep breathing and meditation. Yoga practice also improves life quality by reducing pain, stiffness, depression and sleep disorders.

Chronic nonspecific musculoskeletal pain is a common health problem characterized by recurrences, psychosocial influences, high treatment failures and high rate of working day losses which decreases life satisfaction.

In order to investigate the effect of yoga on quality of life in chronic musculoskeletal pain patients, we conducted a study including 20 individuals having upper back pain for at least 6 months. The volunteers aged between 18-28 years received 55-minute yoga therapy for 10 sessions. The applied Yoga Therapy program consisted of the following:

- Breathingstudies (10 min)
- Instantrelaxationtechnique (2 min)
- Warm-upstudies (10 min)
- Fastrelaxationtechnique (3 min)
- Asanas (20 min)
- Deeprelaxation (10 min)

Life quality was assessed by Short Form 36 (SF 36). SF36 which has been validated in Turkish consists of 36 items and provides 8 dimensional measurements including emotional role functioning (3 items), mental health (5 items), vitality (4 items), physical functioning (10 items), social functioning (2 items), physical role functioning (4 items), emotional role functioning (3 items), bodily pain (2 items) and general health perception (5 items) [2]. Instead of giving only one total score, the scale gives a total score for each subscale. Subscales assess health between 0 and 100, and 0 indicates poor health status, 100 indicates good health status.

Severity of dorsal pain was measured by Visual Analogue Scale (VAS). It is used to convert numerically unmeasured values into numerical values. A two-point definition of the parameter to be evaluated at two end points of a 10 cm line is written and the patient is asked to determine where his or her situation is on this line. (0: no pain, 10: Pain as bad as it could possibly be) [2].

75% of the volunteers were female, 65% were students and 35% were office workers. 75 % had nonspecific dorsal pain while 25% had been previously diagnosed as myofascial pain, misalignment of the cervical and/or lumber column. The findings before and after yoga exercises are given at Table 1. $p<0.05$ was accepted as statistically significant.

	Before	After	p
Physical Functioning	93±7,5	95,8±4,9	,008
Physical Role Functioning	26,9±18,7	43,1±13,1	,000
Bodily Pain	58,5±7,6	72±10	,000
General Health Perception	72,5±18,4	76,3±16	,083
Vitality	64,6±7,6	69,8±5,6	,002
Social Functioning	61,1±15,8	75,1250±12,1	,000
Emotional Role Functioning	67,3±9,4	69,5000±9,5	,058
Mental Health	35,8±18,2	49,1667±3,7	,004
VAS	5±1.5	3.1±1.3	,024

Table 1: Changes in SF-36 Quality of Life scores after yoga exercises.

After 10 sessions of yoga exercises dorsal pain of the participants has decreased significantly. Physical functioning, bodily

pain, vitality, social functioning and mental health scores also improved significantly. Although general health perception was better, it didn't reach statistical significance.

This group of participants have chosen yoga as a means of physical exercise by themselves and have benefitted from the program. In a controlled study ıt has been shown that self efficacy which means individual's belief in the capacity to change outcomes through his or her own actions is high in yoga. High pain self efficacy is positively associated with improved back function and improved physical activity levels. The individuals in our investigation group were probably more motivated and had positive beliefs that they could control their pain favorably by yoga [3].

This observational study supports the healing property of yoga. Yoga has been added to the American College of Physicians and the American Pain Society clinical guideline for management of clubs in 2007 [3]. In AAPM 2016 Annual Meeting. RD Spade reported that yoga was better or not inferior to physical therapy [4]. In LH Schultz's study which investigated the effect of yoga on various back problems, participants were guided through the Krishnamacharya tradition for 12 weeks. In this open, uncontrolled study disability in daily living activities (assessed by Roland Morris disability-RMDS scale), life quality (by SF-36). mood states (by Profile of Mood States short form) and perceived stress was evaluated [5]. Although general health, similar to our study, did not significantly improve from baseline to the end of the program, it reached statistical significance in follow-up. RMDS and PMS have also improved significantly. The gains from the yoga classes were also maintained at least for six months. Besides improving spinal flexibility and strength, yoga offers psychological benefits that makes it a unique experience in pain management. In our study mental health improved significantly which may help to increase awareness on maladaptive ways of moving.

In a systematıc review including 6 randomized studies on treating back or neck pain over 3 months by Iyengar yoga, pain at motion and at rest has considerably decreased. For functional disability a change of 1.57 points in the RMDQ score was found to be cost effective. The yoga group experienced less disability, and better QOL [6]. The authors conclude that the systematic review included studies that have varied methodological quality and lack long-term follow up.

Cochrane library has assessed 12 trials (1080 participants) on non-specific low back pain [7]. RMDS improved small to moderately at six months. In six trials there was moderate-certainty evidence that yoga had increased back pain compared to nonexercised controls. Evidence on physical quality of life was small but statistically significant. It has increased significantly. Decrease in depression although statistically significant, was rated as low certainty because of risk of bias. In the guideline developed by The American College of Physicians (ACP) efficacy, comparative effectiveness, and safety of noninvasive pharmacologic and nonpharmacologic treatments for acute (<4 weeks), subacute (4 to 12 weeks), and chronic (>12 weeks) low back pain in primary care are recommended based on evidence [8]. In this guideline for patients with chronic low back pain, yoga and other nonpharmacological treatments are recommended before considering pharmacological therapy. In Field's clinical research review adults attending the yoga courses had reduced back pain, reported less analgesic and opiate use [1]. They also had fewer sleep disturbances as well as better cognitive functions like long term attention, concentration and recognition.

There are limitations in our study like lack of randomization and lack of a control group. We also didn't have a follow-up period. Our investigation group had upper back pain which was almost unique to our study. Although we found significant improvements in dorsal pain and quality of life parameters at the end of the treatment period, we would like to repeat the study in a more evidence-based design over a more extended period.

References

1. Field T (2011) Yoga clinical research review. Complementary Therapies in Clinical Practice 17: 1-8
2. Koçyiğit H, Gülseren S, Erol A, Hızlı N, Memiş A (2003) The reliability and validity of the Turkish version of Quality of Life Questionnaire of the European Foundation for Osteoporosis (QUALEFFO). Clin Rheumatol 22: 18-23.
3. Evans DD, Carter M, Panico R, Kimble L, Morlock JT, et al. (2010) Characteristics and Predictors of Short-Term Outcomes in Individuals Self-selecting Yoga or Physical Therapy for Treatment of Chronic Low Back Pain. PM R2: 1006-1015.
4. Chou R, Huffman LH, American Pain Society, American College of Physicians (2007) Nonpharmacologic therapies for acute and chronic low back pain: A review of the evidence for an American Pain Society/ American College of Physicians clinical practice guideline. Ann Intern Med 147: 492-504.
5. Schulz LH, Uyterhoeven S, Khalsa SB (2011) Evaluation of a yoga program for back pain. J Yoga PhysTher 1: e103.
6. Crow EM, Jeannot E, Trewhela A (2015) Effectiveness of Iyengar yoga in treating spinal (back and neck) pain. A systematic review. Int J Yoga 8: 3-14.
7. Wieland LS, Skoetz N, Pilkington K, Vempati R, D'Adamo CR, Bernab BM (2017)Yoga treatmentfor chronic non-specific low back pain(Review). Cochrane Database of Systematic Revie 1: CD010671
8. Amir Qaseem, Timothy J, Wilt, Robert M, McLean, Mary Ann Forciea (2017) for the Clinical Guidelines Committee of the American College of Physicians Noninvasive Treatments for Acute, Subacute, and Chronic Low Back Pain: A Clinical Practice Guideline From the American College of Physicians Annals of Internal Medicine 166: 7.