



2017

Efficacy of Yoga Therapy in Treating Low Back Pain

James M. McKivigan

Touro University Nevada, jmckivig@touro.edu

Follow this and additional works at: https://touro scholar.touro.edu/chhs_pubs



Part of the [Alternative and Complementary Medicine Commons](#), and the [Rehabilitation and Therapy Commons](#)

Recommended Citation

McKivigan, J. M. (2017). Efficacy of Yoga Therapy in Treating Low Back Pain. *Annals of Yoga and Physical Therapy*, 2 (4). Retrieved from https://touro scholar.touro.edu/chhs_pubs/34

This Article is brought to you for free and open access by the College of Health & Human Services at Touro Scholar. It has been accepted for inclusion in College of Health & Human Services (TUN) Publications and Research by an authorized administrator of Touro Scholar. For more information, please contact touro.scholar@touro.edu.

Research Article

Efficacy of Yoga Therapy in Treating Low Back Pain

James McKivigan*School of Physical Therapy, Touro University Nevada,
USA***Corresponding author:** James McKivigan, School of
Physical Therapy, College of Health and Human Services,
USA**Received:** August 29, 2017; **Accepted:** October 06,
2017; **Published:** October 13, 2017**Abstract**

Background: Non-specific low back pain is a frequent condition that is often treated using non-pharmaceutical interventions such as exercise therapy. Yoga is one popular form of mind-body workout that can be applied to treat non-specific low back pain.

Objective: To evaluate the impact yoga as a treatment therapy for chronic non-specific low back pain has on pain and functional ability in comparison to no exercise or the prescription of medication.

Search Methods: A review of existing studies that described randomized control trials that focused on the treatment of chronic low back pain with yoga and were published between January 2000 and mid-March 2016 was performed. The studies were identified by performing a search on the following information sources: Embase, MEDLINE, CINAHL, four trial registers and five additional databases.

Results: Previous research in combination with the latest Randomized Control Trials (RCTs) indicate that yoga can increase mobility, reduce pain, can be accomplished safely, and is positively received by patients. Some research indicates that yoga may also enhance psychological symptoms; however, the validity of these findings is yet to be established.

Keywords: Chronic low back pain; Treatment yoga; Randomized control trials

Introduction

A significant amount of money is currently invested in the delivery of health care interventions for the treatment of chronic health issues. These conditions comprise back pain, obesity, and cardiovascular diseases, among others [1]. These lifestyle ailments are typically caused by harmful daily habits that lead to sickness and undermine the mobility of the population. Such behaviors include lack of adequate nutrition, a diet that is high in fat, poor ergonomics in the work environment, and lack of physical exercise, among many others.

Non-specific chronic spinal pain is one of the most commonly reported musculoskeletal ailments, and it has a detrimental economic effect on public health resources and a negative impact on the quality of life of the afflicted individual [2,3]. However, despite the severity of the problems associated with low back pain, medical practitioners find it difficult to formulate efficient preventative interventions that prevent it from escalating to a chronic form.

Previous studies have found that yoga represents an effective intervention by which lower back pain can be treated; for example, that of [4]. Yoga is a nonsurgical, noninvasive, and nondrug alternative that can bring about positive changes to health-related behaviors [5]. If practiced correctly, yoga poses can help reduce pain and enhance mobility.

Methods

Review

A review of the existing studies that have examined the extent

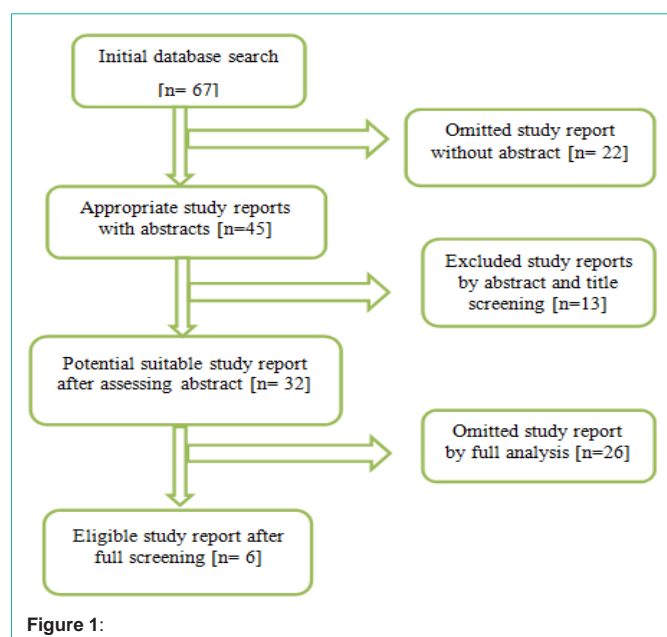
to which practicing yoga can reduce the impact yoga has on patients with chronic low back pain been conducted. The Embassy, PubMed, Cochrane, CINAHL, CENTRAL, and MEDLINE databases were searched for articles that were published between January 2000 and mid-March 2016 that contained the following keywords: low back pain, Yoga, sickness, disability, exercise, review.

Study inclusion and exclusion criteria

The inclusion criteria were as follows: (1) The participants of the studies included in the review were diagnosed with chronic low back pain, (2) yoga represented the primary intervention for treating the chronic back pain, (3) the article was original, (4) the article described a clinical trial, (5) the article was written in English, (6) the study compared two distinct groups of students with chronic low back pain that were randomly allotted to either a group that practiced yoga or a group that acted as a matched control, (7) the participants had a neurological or severe spinal pathology, and (8) the study monitored pain or pain-linked functional results. The exclusion criteria were as follows: (1) Studies that included participants who were under the age of 18 and (2) those that included subjects who did not disclose chronic low back pain.

Selection of studies

The original search of the database identified 67 studies that were potentially relevant to the review. The study reports that did not include an abstract were omitted, leaving 45 articles. The abstracts and titles of the remaining articles were carefully screened against the inclusion criteria, and 32 articles were selected for further evaluation. Following a review of the full body of the articles against the inclusion criteria, six studies were determined to be appropriate to the research



objectives. The remaining articles were excluded on the basis of incorporation of other treatment modalities such as physical therapy, and manual therapy. These studies subsequently underwent an extensive review and were rated according to the Oxford Centre for Evidence-based Medicine guidelines (Figure 1).

Results

Studies that describe yoga as a form of treatment for chronic low back pain typically use some measure of physical disability and functioning as a primary means of measuring the outcome of the intervention [6]. Nambi et al. [7] found that yoga has a beneficial impact on adults who suffer from chronic low back pain. Within this study, the effects of yoga were analyzed over a 16-week, randomized trial through which participants with non-specific chronic low back pain were divided into two groups: One group completed a yoga intervention, the second acted as the control. The results revealed that the yoga participants experienced less pain and lower functional disability at the end of the 16-week period than the controls. William et al. [6] completed a 6-month study that found the participants that were subjected to a yoga intervention exhibited significantly reduced

functional disability, depression and pain intensity following the completion of the program (Table 1).

Tilbrook et al. [8] compared two groups of individuals who suffered chronic low back pain: One group attended a three-month yoga program and the second was given an educational booklet on managing chronic low back pain. At the three-month interval follow-up, the yoga group had a considerably better back function based on Roland-Morris disability than the group that was given the educational booklet. However, no significant differences between the two populations were identified in terms of intervention, proximate result and pain levels.

Pain

Various studies have demonstrated yoga's efficacy to reduce chronic low back pain. Tekur et al. [9] analyzed pain beliefs, pain-linked fears to mobility, and clinical levels of pain in a population of people who were suffering from chronic low back pain. The results indicated that the group that completed yoga interventions benefited from two times higher reduction in pain than those who were prescribed medication as the primary form of treatment.

Saper et al. [10] examined the impacts yoga has on back pain among a population that consisted of racially diverse, low-income individuals. The subjects were divided into two groups. The first group participated in 12 weeks of weekly yoga, the second group participated in intensive stretching classes or a self-care book. Following the intervention, the mean low back intensity of the subjects substantially reduced from 7 to 5 based on the Visual Analog Scale after a three-month period, irrespective of whether the subjects attended yoga classes once or twice per week. Sherman et al. [3] acknowledged that pain is complex and assessed it using multiple methods to include fear avoidance, self-efficacy, perceived distress, improved sleep, conscious awareness of body, psychological distress, and hours of back exercise. Sherman's report showed that all interventions were supportive, but the yoga subjects demonstrated a statistically significant improvement. Tekur et al. [9] performed a randomized control trial that examined the effect I yengar yoga had on pain intensity and the associated quality of life in participants who were suffering from non-specific chronic low back pain. The participants were divided into two groups. One group underwent a course of yoga therapy while the second completed conventional exercise therapy. At the 24-week follow-up assessment, the participants who completed

Table 1:

| First Author | Study Field | Yoga Intervention | Comparison Intervention | Major Outcomes | Primary Outcomes | Oxford Level of Evidence |
|---------------------------|-----------------------|---|--|----------------------|--|--------------------------|
| Nambi et al. (2014) | RCT | Home practice Once weekly | Conventional exercise therapy | VAS | Both groups showed enhanced outcomes | 2 |
| Saper et al. (2013) | Exercise intervention | Once per week therapy 12 weeks | Twice per week yoga 12 weeks | RMD, pain | No variance | 1 |
| Sherman et al. (2013) | RCT | Weekly stretching 12 weeks, self-care book | Weekly stretching 12 weeks, self-care book | RMD, pain | Same impacts of yoga and stretching | 2 |
| Tekur et al. (2010) | RCT | Intensive home yoga program, daily yoga practices | Lectures on CLBP, week- long home practices | Straight leg raising | Greater progress in ability to raise leg straight in yoga category | 2 |
| Tilbrook et al. (2011) | RCT | Weekly yoga program 12 weeks | Normal care | RMD | Greater improvements for yoga group in back function | 2 |
| Williams et al. (2009) | RCT | Twice per week yoga practice 6-months | Self-focused standard medical practice | Visual Analog Scale | Greater reduction in pain intensity and functionality disability in the yoga group. | 2 |

the yoga intervention exhibited an improvement in their pain levels, ability to cope with their pain, and increase activities of daily living in comparison to the control.

Discussion

As the review outlined above indicates, engaging in yoga can reduce pain and increase functional ability in patients who suffer from chronic low back pain. As such, yoga may be an efficacious treatment for people who suffer from chronic low back pain who are seeking non-surgical intervention. Furthermore, in addition to strengthening and stretching the lower-back muscles and extremities, yoga offers the added advantage of breathing and meditation exercises that may reduce the stress of people who are experiencing low back pain. Yoga acts as an operational non-pharmacologic treatment that reduces the functional disability associated with lower-back pain. It can more efficiently reduce the pain intensity of chronic low back pain in comparison to alternative interventions. As the study by William et al. [6] demonstrated, yoga may also have positive impacts on depression. The research that was studied as part of this review indicated that yoga represents an effective intervention for people who are suffering from chronic lower-back pain.

References

1. Nambi GS, Inbasekaran D, Khuman R, Devi S, Shanmuganathan, K Jagannathan. Changes in pain intensity and health related quality of life with lyengar yoga in nonspecific chronic low back pain: A randomized controlled study. *International Journal of Yoga*. 2014; 7: 48.
2. Holtzman S, Beggs RT. Yoga for chronic low back pain: A meta-analysis of randomized controlled trials. *Pain Research and Management*. 2013; 18: 267-272.
3. Sherman KJ, Wellman RD, Cook AJ, Cherkin DC, Ceballos RM. Mediators of yoga and stretching for chronic low back pain. *Evidence-based Complementary and Alternative Medicine*. 2013
4. Cramer H, Lauche R, Haller H, Dobos G. A systematic review and meta-analysis of yoga for low back pain. *Clinical Journal of Pain*. 2013; 29: 450-460.
5. Wellington J. Noninvasive and alternative management of chronic low back pain efficacy and outcomes. *Neuromodulation*. 2014; 17: 24-30.
6. Williams K, Abildso C, Steinberg L, Doyle E, Epstein B, Smith D, et al. Evaluation of the effectiveness and efficacy of lyengar yoga therapy on chronic low back pain. *Spine*. 2009; 34: 2066-2076.
7. Nambi GS, Inbasekaran D, Khuman R, Devi S, Shanmuganathan, K Jagannathan. Changes in pain intensity and health related quality of life with lyengar yoga in nonspecific chronic low back pain: A randomized controlled study. *International Journal of Yoga*. 2014; 7: 48.
8. Tilbrook HE, Cox H, Hewitt CE, Kang'ombe, AR, Chuang LH, Jayakody S, et al. Yoga for chronic lowback pain: a randomized trial. *Ann Intern Med*. 2011; 155: 569-578.
9. Tekur P, Chametcha S, Hongasandra RN, Raghuram N. Effect of yoga on quality of life of CLBP patients: A randomized control study. *International Journal of Yoga*. 2010; 3: 10-17.
10. Saper RB, Boah AR, Keosaian J, Cerrada C, Weinberg J, Sherman K. Comparing once-versus twice-weekly yoga classes for chronic low back pain in predominantly low-income minorities: A randomized dosing trial. *Evidence-Based Complementary and Alternative Medicine*. 2013.