ISSN: 2349 - 4891

International
Journal of Recent Research and Applied Studies
(Multidisciplinary Open Access Refereed e-Journal)

Effect of Yogic Practices on Selected Clinical Variables among Women Low Back Pain Sufferers

S.Ramya

Ph.D Research Scholar, TNPESU, Chennai, Tamilnadu, India.

Received 23rd May 2016, Accepted 10th July 2016

Abstract

The purpose of the study was to find out the effect of yogic practices on selected clinical variables among women low back pain sufferers.The sources of subjects for this study were thirty (n=30) women low back pain sufferers were randomly selected as subjects from Iswaryam Nature Cure Centre in Salem district. The subject's age was ranged between 28 to 35 years. They were randomly divided into two groups namely experimental and control group of fifteen each. The yogic practices were designed based on the result of the pilot study. During the training programme the experimental group underwent yogic practices for five days in a week for eight weeks and the control group was not exposed to any training except their regular work. The subjects were tested prior to and after the experimentation on the selected Clinical Variables such as Functional disability and Pain. The Quebec Back Pain Disability Scale and Visual Analogue Scale were used to analyse the clinical variables. The collected data from the subjects initial and final readings were statistically analyzed to assess the significance by computing't' ratio. The level of significance was chosen at 0.05 level of confidence which was considered adequate for the purpose of the study. The findings of the study showed that there was a significant improvement found between pre and post test on selected clinical variables of experimental group when compared to control group.

Keywords: Yogic practices, Functional disability, Pain.

Introduction

Yoga is not an ancient myth buried in oblivion. It is the most valuable inheritance of the present. It is the essential need of today and the culture of tomorrow". God created man and woman as equal partners to share life. The material and spiritual burdens of life fall equally on the shoulders of man and woman desire good health, mental peace and poise in life. Yoga is beneficial to both man and women. Women need yoga even more than men as the responsibilities thrust upon them by nature are greater than men. They have to undergo three important stages in life like menstruation, pregnancy and menopause. Back pain may be characterized by a dull ache, or a sharp or piercing or burning sensation. The pain may radiate into the arms and hands as well as the legs or feet, and may include symptoms other than pain, may include tingling, weakness or numbness in the legs and arms, indicating injury to the nerves. Low back pain affects millions of people worldwide. In addition to low back pain, chronic pain is associated with increased disability and psychological symptoms, and reduced health-related quality of life. There are many treatment options for chronic low back pain, although no single therapy stands out as being the most effective.

Correspondence
S.Ramya
E-mail: pkvramya@gmail.com, Ph. +9188703 76979

Back pain is a common and costly health problem, with more than 50% of adults bothered by it each year and 70% to 80% of adults afflicted by it at some time in their lives .Although there are a wide variety of treatments for back pain, including medications, exercise, education, self-care, injections, life-style aids, manual therapies, complementary and alternative medicine therapies, minimally invasive treatments and surgery, there is surprisingly little consistent evidence to support most of these treatments due to unavailable, insufficient or conflicting evidence. Yoga helps increase strength in very specific muscles and muscle groups. Holding positions in yoga is not intended to be uncomfortable. However, it does require concentration and specific use of muscles throughout the body. Muscle strength improves by remaining in these yoga positions and incorporating various movements.

Review of Related Literature

Sawyer et.al (2012) examined the effects of yoga on chronic low back pain and function. yoga was found to result in a medium, beneficial effect on chronic low back pain ,overall effect size 0.58, $p<0.001$, indicating that subjects practicing yoga reported significantly less pain than control subjects. Yoga subjects also reported significantly less functional disability after the intervention overall effect size 0.53, $p<0.001$. Moreover, the improvements in pain and function for yoga subjects remained statistically significant 12-24 weeks after the end of the intervention

overall effect size 0.44-0.54, p≤0.002. Yoga practice can significantly reduce pain and increase functional ability in chronic low back pain patients. Holtzman and Beggs (2013) evaluated the efficacy of yoga as an intervention for chronic low back pain using a meta-analytical approach. Randomized controlled trials that examined pain and functional disability as treatment outcomes were included. Post-treatment and follow-up outcomes were assessed. Eight Randomized controlled trials met the criteria for inclusion in eight assessing functional disability and five assessing pain and involved total of 743 patients. At post-treatment, yoga had a medium to large effect on functional disability and pain. Despite a wide range of yoga styles and treatment durations, heterogeneity in post-treatment effect sizes was low. Follow-up effect sizes for functional disability and pain were smaller, but remained significant; however, there was a moderate to high level of variability in these effect sizes. Results of the present study indicate that yoga may be an efficacious adjunctive treatment for chronic low back pain. The strongest and most consistent evidence emerged for the short-term benefits of yoga on functional disability.

Methodology

To achieve the purpose of the present study thirty women low back pain sufferers were randomly selected as subjects from Iswaryam Nature Cure Centre in Salem district. The subject's age was ranged between 28 to 35 years. They were randomly divided into two groups namely experimental and control group of fifteen each. The yogic practices were designed based on the result of the pilot study. During the training programme the experimental group underwent yogic practices for five days in a week for eight weeks. The training was carefully scheduled and administered in the evening session from 5.00 to 6.00pm and the control group was not exposed to any training except their regular work. The subjects were tested prior to and after the experimentation on the selected Clinical Variables such as Functional disability and Pain. The Quebec Back Pain Disability Scale and Visual Analogue Scale were used to analyse the clinical variables such as functional disability and pain. The collected data from the subjects initial and final readings were statistically analyzed to assess the significance by computing 't' ratio.

Analysis of Data

Table I. Computation of't'-ratio between the pre and post tests on functional disability of Experimental and Control groups

Variable	Group	Pre test		Post test		't' Ratio
		Mean	SD	Mean	SD	
Functional disability	Experimental Group	23	6	14	6	4.11*
	Control Group	22	10	18	7	1.26

* Significant at 0.05 level of confidence with (df) 28 was 2.048

The table – I indicates the obtained't' test value of functional disability in experimental group is 4.11, which are greater than table value of 2.048 with df 28, it indicates there was significant improvement found between pre and post test. The obtained't' test value of functional disability in control group is 1.26 which are less than the table value of 2.048 with df 28 at .05 level of confidence.

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Table II. Computation of't'-ratio between the pre and post tests on pain of Experimental and Control groups

Variable	Group	Pre test		Post test		't' Ratio
		Mean	SD	Mean	SD	
Pain	Experimental Group	2.3	1.6	1.0	1.1	3.27*
	Control Group	3.2	2.3	2.1	2.3	1.32

* Significant at 0.05 level of confidence with (df) 28 was 2.048

The table – II indicates the obtained't' test value of pain in experimental group is 3.27, which are greater than table value of 2.048 with df 28, it indicates there was significant improvement found between pre and post test. The obtained't' test value of pain in control group is 1.32 which are less than the table value of 2.048 with df 28 at .05 level of confidence.

Discussion on Findings

In the past 10 years, yoga interventions have been studied as an additional approach for treating low back pain. Many of the postures in yoga gently

strengthen the muscles in the back, as well as the abdominal muscles. It is an essential component of the muscular network of the spine, helping the body to maintain proper upright posture and movement. When these muscles are well conditioned, back pain can be greatly reduced or avoided. The concept of developing strong muscles in the spine is believed to reduce the risk of both acute and chronic back pain and also enhance weak muscles. Hence yogic practices help to cure the health ailments like low back pain.

Conclusions

1. There was a significant improvement found between pre and post tests on selected clinical variables of experimental group.
2. From the results it was also found that the eight weeks of systematic yogic practices have contributed significantly on the selected clinical variables among women low back pain sufferers.
3. There was no significant difference found between pre and post tests on the selected clinical variables of control group.

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