

## EFFECT OF HATHA YOGA PRACTICES AND THERAPEUTIC EXERCISES ON PAIN AMONG OLD AGED WOMEN WITH ARTHRITIS

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### Abstract

The purpose of the present study was to find out the effect of hatha yoga practices and therapeutic exercises on pain among old aged women with arthritis. The study was conducted on 45 old aged women with arthritis. Totally three groups, namely, control & experimental group I & II, consisting of 15 old aged women with arthritis underwent six weeks of practice in Hatha yoga practices and therapeutic exercises whereas the control group did not undergo any type of training. The Pain was measured before and after the experimentation using the “Visual Analogue Scale (VAS)” to measure the Pain. The data were analyzed by Analysis of Co-variance (ANCOVA) and it was concluded that the Hatha yoga practices and therapeutic exercises had significant ( $P < 0.05$ ) effect on the Pain level.

Key words: Hatha yoga practices and therapeutic exercises, Pain.

### INTRODUCTION

“Sama dosha samagnisca sama dhatu mala kriyaha”

The person who always eats wholesome food, enjoys a regular lifestyle, remains unattached to the objects of the senses, gives and forgives, loves truth, and serves others, is without disease. The total of body, mind and spirit. It includes physical health, mental health, emotional health, and social health.

Yogic exercises recharge the body with cosmic energy. This facilitates

- Attainment of perfect equilibrium and harmony
- Promotes self- healing.
- Removes negative blocks from the mind and toxins from the body
- Enhances Personal power
- Increases self-awareness
- Helps in attention focus and concentration, especially important for children
- Reduces stress and tension in the physical body by activating the parasympathetic nervous system.

According to Patanjali, one can attain this (the individual self with the Supreme One) union by controlling and eliminating the ever- arising ‘**vrittis**’ or modifications of the mind. He also suggests that the mind, in turn, can be controlled through the right kind of discipline and training. Patanjali says that there are basic obstacles pervading the mind that are not conducive to yoga practice.

He divides these **obstacles** into two groups:

1. **Antarayas (intruders in the path of yoga)**
2. **Viksepasahabhuvah (co-existing with mental distraction)**

**There are nine Antarayas. They are,**

1. Vyadhi (physical disease)
2. Styana (mental laziness)
3. Samsaya (doubt)
4. Pramada (heedlessness)
5. Alasya (physical laziness)
6. Avirati (detachment)
7. Bhrantidarsana (false perception)
8. Alabdha- bhumikatva (non-attainment of yogic states)
9. Anavasthitatva (falling away from yogic states attained)

The above obstacles block the flow of prana (life force) in Astral body (koshas and chakras) leads to ATHI.

This ATHI (stress) spread from one place to and occupy the entire body known as Vyathi (diseases). If stress occurs in the Astral body (sukshuma sarira) it reflects in the physical body (sthoola sarira). So as the result the entire body became prey to deadly diseases and disorder.

***“LIFE is MOVEMENT, and MOVEMENT is LIFE”***

Live movements take place at joints. Arthritis hampers joint movement and disturbs normal life. Arthritis is “Chronic Inflammation of Joint”. Inflammation is indicated by stiffness, swelling, redness or warmth in the joints. Any part of the body can become painful due to arthritis. Typically, when one suffers from arthritis, these symptoms are exhibited

1. Apparent loss of flexibility in a joint
2. Extreme fatigue
3. Lack of energy.

## **TYPES OF ARTHRITIS**

**1. Osteoarthritis**

In osteoarthritis, the cartilage begins to fray and may entirely wear away. Osteoarthritis can cause joint pain and stiffness.

**2. Rheumatoid Arthritis**

It is a type of chronic or long-lasting disease which mainly affects the joints in the body. Here in this type the immune system of the body causes the swelling in the joints. This creates the pain, stiffness, swelling joint damage and loss of function of some of the bones.

**3. Juvenile Rheumatoid Arthritis**

This is a rare type of arthritis which mainly affects the children. It causes the pain, stiffness, swelling, loss of function of the joints. The reason for the cause for this type of arthritis is not known till now. But it is considered that it is an autoimmune disease. Juvenile rheumatoid arthritis is not hereditary.

**4. Gout**

Gout is created because of the deposits of needle-like crystals of uric acid in the joints. These crystals cause inflammation, swelling, and pain in the affected joint, which is often the big toe. Apart from toe it affects foot, ankle, knee etc.

**5. Infectious Arthritis**

This type of arthritis is caused by infectious agents such as bacteria or viruses.

**6. Psoriatic Arthritis**

This type of arthritis occurs in patients with psoriasis. Psoriatic arthritis often affects the joints at the ends of the fingers and toes. Back pain will occur if the spine is involved.

**7. Fibromyalgia**

This causes a widespread pain at tender points such as head, neck, spine, hips, elbows and shoulders of the body. People with fibromyalgia usually have fatigue, disturbed sleep and stiffness. Fibromyalgia does not cause any joint or muscle damage.

**8. Lupus**

It is a type of disease that mainly affects the skin and the joints and, in some cases, it may affect the internal organs also such as the kidneys, lungs or heart. Women are more affected by these diseases than their counterparts.

**9. Bursitis and tendonitis**

Bursitis and tendonitis are caused by irritation from injuring or overusing a joint. Bursitis affects a small sac called the bursa that helps to cushion the muscles and tendons surrounding the joint. Tendonitis affects the tendons that attach muscle to bone.

**9. Ankylosing Spondylitis**

This is a type of chronic inflammatory arthritis that mainly affects the spine and pelvis.

**10. Reactive arthritis**

This is a temporary inflammation of the joints as a reaction to an infection elsewhere in the body.

**11. Polymyalgia Rheumatica**

This is an inflammatory condition affecting the muscles and soft tissues in the shoulder and upper arm, buttocks and thighs. It causes tiredness, stiffness, loss of weight and occasionally circulation problems.

### STATEMENT OF THE PROBLEM

The purpose of the study was to find out the effect of Hatha yoga practices and therapeutic exercises on Pain among Old aged women with arthritis

### HYPOTHESIS

It was hypothesized that there would be a significant difference on Pain among old aged women with arthritis due to Hatha yoga practices and therapeutic exercises groups than the control group.

### METHODOLOGY

The purpose of the study was to find out the effect of Hatha yoga practices and therapeutic exercises on Pain among Old aged women with arthritis. For the purpose of this study, forty-five old aged women with arthritis were chosen on random basis from Chennai only. Their age group ranges from 55 to 60.

The subjects were divided into three group of fifteen each. The experimental group I would undergo Hatha yoga practices with therapeutic exercises and the experimental group II undergo Hatha yoga practices without therapeutic exercises and third group consider as control group not attend any practices, and the pre test and post test would be conducted before and after the training. Training would be given for six weeks. It would be found out finally the effect of Hatha yoga practices and therapeutic exercises on Pain among Old aged women with arthritis in scientific method. The visual analog scale measured for Pain. The collected data were statistically analyzed by using analysis of covariance (ANCOVA).

### Training Schedule

Experimental Group I : Hatha yoga practices with therapeutic exercises

Experimental Group II : Hatha yoga practices without therapeutic exercises

Group III : Control Group ( No Training).

### COMPUTATION OF ANALYSIS OF COVARIANCE AND POST HOC TEST ON PAIN

The statistical analysis comparing initial and final means of Pain due to Hatha yoga practices and therapeutic exercises among Old aged women with arthritis is presented in Table I.

**TABLE – I**  
**ANALYSIS OF COVARIANCE OF THE MEANS OF TWO EXPERIMENTAL GROUPS AND THE CONTROL GROUP IN PAIN**

					df			F

Test	Ex. Group. I	Ex. Group. II	Control group	Source of variance		Sum of square	Mean square	
Pre-test mean	7.26	7.07	7.33	Between	2	0.58	0.289	0.21
				Within	42	57.20	1.36	
Post-test mean	5.8	4.33	7.40	Between	2	70.58	35.29	31.31*
				Within	42	47.33	1.13	
Adjusted mean	5.78	4.41	7.35	Between	2	64.48	32.24	37.67*
				Within	41	35.087	0.86	

\*  $F_{(0.05)}(2,42 \text{ and } 2, 41) = 3.23$ . \*Significant at 0.05 level of confidence.

Since significant improvements were recorded, the results were subjected to post hoc analysis using Scheffe's Confidence Interval test. The results were presented in Table II.

To find out which of the paired means had a significant difference, the Scheffe's post-hoc test is applied and the results are presented in table II.

**TABLE II**  
**SCHEFFE'S POST-HOC TEST FOR PAIN**

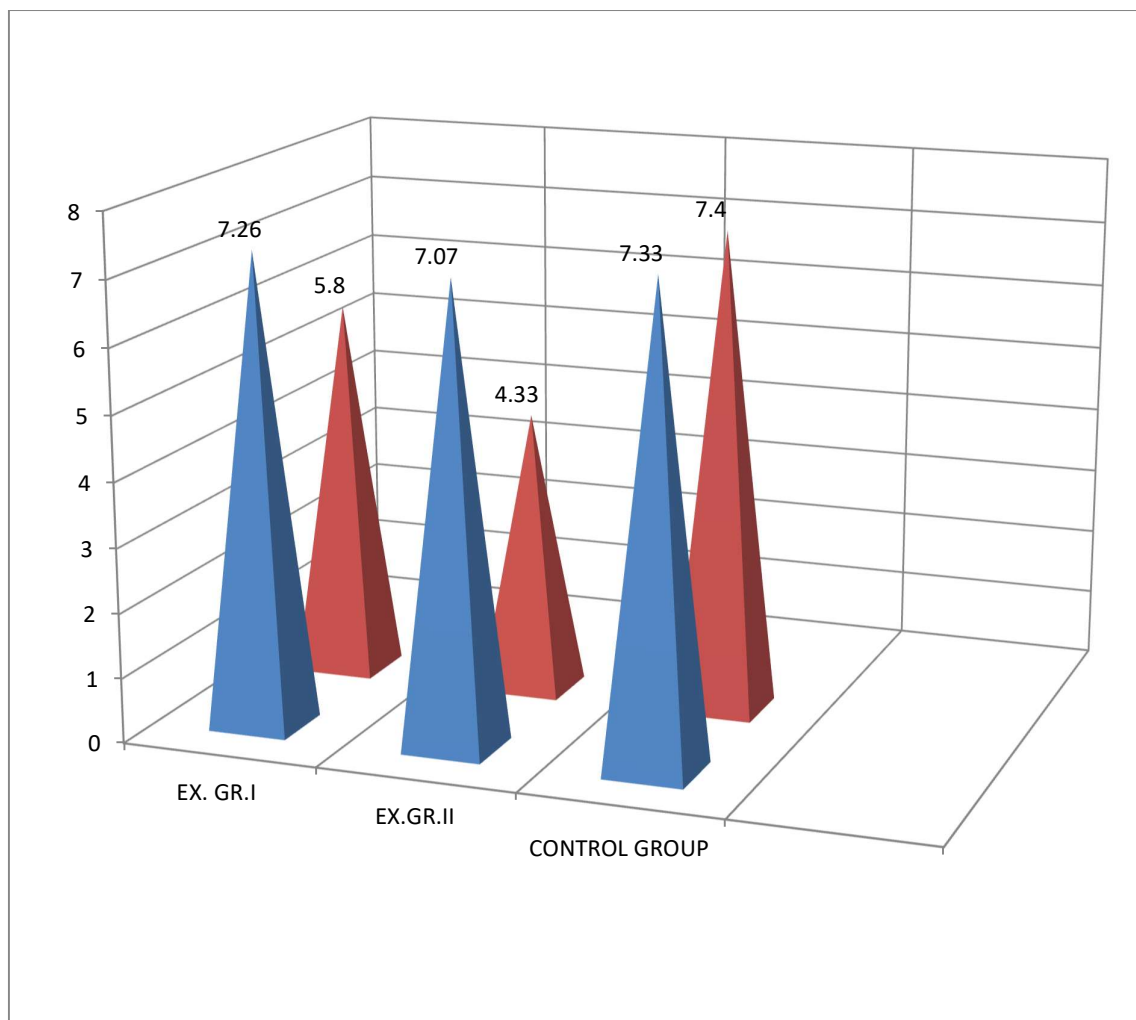
Ex. Group. I	Ex. Group. II	Control group	Mean Difference	CI
5.78	---	7.35	1.57	0.84
---	4.41	7.35	2.94	0.84
5.78	4.41	---	1.37	0.84

\* Significant at 0.05 level.

The ordered adjusted means were presented through bar diagram for better understanding of the results of this study in Figure 1.

FIGURE – 1

**Bar diagram showing the mean difference among Experimental Group I,  
Experimental Group II and Control Group of Pain**



## RESULTS AND DISCUSSIONS OF PAIN

Taking into consideration of the pre test means and post test means adjusted post test means were determined and Analysis of Covariance was done and the obtained F value 37.67 was greater than the required value of 3.23 and hence it was accepted that the Hatha yoga practices and therapeutic exercises significantly improved (Decrease) the Pain among male Old aged women with arthritis at 0.05 level.

The post hoc analysis of obtained ordered adjusted means proved that there was significant differences existed between Hatha yoga practices with therapeutic exercises group and control group and Hatha yoga practices without therapeutic exercises group and control

group on Pain. This proved that due to six weeks of Hatha yoga practices with therapeutic exercises practices and Hatha yoga practices without therapeutic exercises Pain was significantly improved (Decrease) among Old aged women with arthritis

### DISCUSSION ON THE FINDINGS OF PAIN

The Analysis of Co-variance of Pain indicated that experimental group I (Yogic practices with diet modifications), experimental group II (Hatha yoga practices without therapeutic exercises Practices), were significantly improved (Decrease) than the control group on Pain. It may be due to the effect of Hatha yoga practices with therapeutic exercises and Hatha yoga practices without therapeutic exercises Practices.

The findings of the study showed that the experimental group I (Hatha yoga practices with therapeutic exercises) had improvement (Decrease) Pain more than the experimental group II (Hatha yoga practices without therapeutic exercises Practices). Nearly everything in life requires balance. Hatha yoga practices and therapeutic exercises on its own is a good step toward a healthy life style. However, as individual, it is important to malaise that we need to work on our body as well as our mind.

### CONCLUSION

There was a significant improvement (Decrease) in Pain of experimental groups when compared to the control group. Hatha yoga practices with therapeutic exercises group has shown improvement than the Hatha yoga practices without therapeutic exercises.

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