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Effect of simplified Kundalini yoga in the management of cervical spondylosis

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Abstract

Background: Pain arising from the cervical spine is felt in the neck and the back of head which is evoked or enhanced by certain movements or positions of the neck. Neck pain is the most common complaint. We can see that conventional treatment for neck pain might not be adequate through various studies. Simplified Kundalini Yoga techniques were proved to be effective in most cases of cervical spondylosis also named as cervical vertebral ankylosis.

Objective: The aim of this study was to examine the management of Simplified Kundalini Yoga practices on cervical vertebral ankylosis.

Methods: In this study which is randomized and controlled, (n=40) patients in the age group of 25 to 45 with chronic neck pain were selected as subjects and assigned to two groups. From the (n=40), (n=20) participants in the experimental group were asked to attend an hour of SKY yoga class for weekly 6 days except Sunday for a period of 3 months. The SKY yoga consists of meditation, simplified exercises, and introspection and relaxation practices. The other control group of (n=20) patients did not receive any yoga interventions. Both the groups were asked to complete questionnaires using visual analog scale, before and after assessment. Visual analog scale (VAS) (used to measure the pain severity) was used to evaluate both the groups.

Result: The result of this interventional study includes (n=20) subjects from the experimental group and another (n= 20) subjects from the control group. Analysis of covariance (ANCOVA) was applied to find out the difference between means of the two groups. The (n=20) subjects who underwent yoga classes showed a significant change in visual analog score than those in the control group.

Conclusion: From this study we can conclude that SKY yoga and practices are much effective than other treatments in curing neck pain and stiffness of neck.

Keywords: Cervical Spondylosis, pain and stiffness of the neck, simplified Kundalini yoga

Introduction

The Sanskrit word 'Yuj' which laterally called as Yoga and it means "to unite" or "to join" or "combine". Most people think that yoga is nothing but a series of twisted poses which is not true. The ultimate aim of Yoga is to help one to connect ones' inner spirit with the universal spirit or God. Yoga results in self-enlightenment by creating a balance between one's body and mind. It provides stability to the body and wavering mind. In order to accomplish this, yoga makes use of different body movements, breathing exercises, relaxation techniques and meditation. Yoga paves way to a balanced approach to life through a healthy and active lifestyle. It is the perfect union of the spirit, body and mind. It also includes the practice of physical postures, known as 'Asana' in Sanskrit.

We go through a lot of stress due to our modern lifestyle and this often leads to lifestyle problems like hypertension, back pain, high cholesterol, obesity and diabetes. All these problems have one solution, which is yoga. It offers effective solutions to these problems in the form of relaxation. Medical studies suggest that yoga can provide a solution to all problems as it incorporates different aspects of science, philosophy and art in the series of physical exercises. It helps gain control and experience joy in life through an integrated set of practices.

Simplified Kundalini Yoga

Thathuvagnani Vethathiri Maharishi served mankind for over 55 years in order to establish world peace which is achieved when each individual realizes the value of self and learns to

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preserve harmony with environment. He was a spiritual leader, world peace activist, scientist, philosopher, Siddha, Ayurvedic and Homeopathic practitioner and Founder Trustee of the World Community Service Centre in 1958 in Chennai.

For our life to be happy, successful and harmonious, good physical health is indispensable. Realizing the importance of proper exercise and meditation, Thathuvagnani Vethathiri Maharishi has synthesized and simplified the earlier ones and dedicated it to the human kind through Simplified Kundalini Yoga meditation, Physical Exercises, Kaya Kalpa Yoga and Introspections. The Simplified Kundalini Yoga (SKY) is also known as Manavalakalai Yoga. A systematic training of mind is required to bring about tranquility, increased sense of awareness, clarity and strengthening of mind. Simplified Kundalini Yoga offers various levels of approach to relax, energize, remodel and strengthen the body and psych. The Human body consists of three layers namely Physical Body, Astral Body and Casual Body, each of which is linked to the other two. Physical Body is made up of millions of cells. Each cell is formed through an association of energy particles (life force) also called as astral body. The Magnetism, which fills the entire universe, is called The Universal Magnetism and which is within the living beings is Bio-magnetism. Bio-magnetism is the phenomenon of production of magnetic fields by living organisms and it is a subset of bio electromagnetism. In contrast, organisms' use of magnetism in navigation is known as magnetoception. In and around every cell, infinite number of tiny particles are circulating, each of which keeps rotating. Due to this self-rotation a "centrifugal force" is generated. This particle is called the "life-force". This self-rotation gives rise to a "spreading wave", which spreads throughout the body. Collectively this phenomenon is called "bio-magnetism". Sufficient intensity of bio magnetism maintains good health.

Each cell absorbs what is needed from this bio magnetic force and eliminates wastes. Bio Magnetism prevents disintegration of cells. The circulation of the life force energy particles gets disrupted when an obstruction occurs in any of the other three circulations viz. blood, heat and air. This results in stagnation of bio magnetism, followed by a short circuit, which is felt as pain in our body. As soon as pain is felt, life energy particles flow to that part of the body. During this process, the rotational speed of life force particles is increased, and the quantity of bio-magnetism generated is also increased. The bio-magnetism removes the block and alleviates the pain. Sometimes the pain persists and spreads to the other parts of the body and it becomes a disease. Bio magnetism can be intensified through the practice of exercises, meditation, and introspection and this intensified bio magnetism improves physical and mental health and helps achieve prosperity.

Neck pain



Pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of damage – IASP (International Association for the Study of Pain).

There are three major categories of painful disease concerning the spine, thoracic outlet and shoulder. Although pain in these three regions of the body may be overlapping, the patient usually can indicate the site of origin. Pain arising from the cervical spine is felt in the neck and the back of the head (it may be projected in the shoulder and arm), is evoked by certain movements or positions of the neck and is accompanied by tenderness and limitation in motions of the neck. Similarly, pain resulting from abnormalities of the thoracic outlet is induced by the performing certain tasks and by certain positions. It is experienced in and around the shoulders and is associated with tenderness of the structure above the clavicle.

Cervical vertebral ankylosis is a condition where the vertebrae and disks of the neck gradually degenerate. It is prevalent in both genders after 40 years of age. It results in chronic pain frequently in the neck area, caused by aging and degenerative changes in the cervical spine. Faulty sleeping habits, severe stress, anxiety, sudden jerks to neck, occupational hazards as in computer professionals or BPO workers and additional load on the neck may be the prime reasons for cervical vertebral ankylosis. Youngsters are also prone to this condition due to improper lifestyle changes and a sedentary life. Long working hours, lack of physical exercise and heightened stress makes it a chronic health issue in the long term. Sitting in an uncomfortable posture for extended periods and obesity are also known to contribute to the pain. The chances of falling prey to cervical spondylosis are higher if there is a history of the same in the family.

In most cases, there are no symptoms of degeneration. Patients may have acute or subtle symptoms which is manifested by the age of 50 or 60. The patient may have difficulty rotating the head or tilting it to the shoulder in this condition. Headaches usually occipital, persistent, and not pulsating are less prevalent and occur as a secondary phenomenon due to spasms in the neck.

Simplified Kundalini Yoga practices for Cervical Spondylosis

Yoga is a natural and holistic remedy for cervical spondylosis. SKY practice is a multi functional mode of exercise with several benefits. The pathology concerning neck disorders still remains undisclosed, hence treatments are aimed only for temporary pain relief. Regular practice of simplified exercise which includes hand, leg, breathing and makarasana exercises along with regular meditation can help relieve pain. The meditation and relaxation in SKY yoga initiates a "relaxation response" in the neuro endocrinal system that will harmonize the physiological system. This results in decreased metabolism, decreased rate of breathing, decreased blood pressure, decreased muscle tension, decreased heart rate and the brain waves comes from Beta to Alpha level. As we correct the neural discharge pattern, the habitual deep muscle hyper tonicity and thus the static load on postural muscle also slowly comes down. Thereby fatigue level comes down too. Meditation causes several subtle level notional corrections, that changes the context of the disease, pain and the meaning of life. Meditation, breathing exercise and relaxation can help individuals in dealing with the reactive aspects of chronic pain, reducing anxiety and depression.

The present study was planned to assess the effect of Simplified Kundalini Yoga practices on cervical spondylosis.

Symptoms of cervical spondylosis

- Chronic neck pain
- Pain in the shoulder blades
- Stiff neck
- Headache at the back of the head

Stress

Millions of people are suffering from chronic pain. Arthritis and back pain are the main forms; others include everything from fibromyalgia to cancer. As yoga therapy grows visibly, many of the people come looking for relief and fortunately, yoga has much to offer.

Stress can exacerbate pain, whatever may be its cause. your pain tolerance may be lower when you are feeling overwhelmed by stress. And a vicious cycle often ensues because we become stressful when in pain. Yoga is perhaps the best system of stress reduction ever invented, can help interrupt this cycle.

Methodology

In this randomized controlled study, 40 patients in the age group of 25 to 45 with chronic neck pain were selected as subjects from The Nilgiris district, Tamil Nadu, India. (n=20) patients were assigned to experimental group who were given SKY yoga classes for 6 days a week except Sunday for a period of three months. The participants consent was obtained, and they were informed about the aims and objectives of this study. The experimental group practiced 20 minutes of simplified exercise (yoga), 20 minutes of meditation, 10 minutes relaxation practices and 10 minutes introspection awareness class. The (n=20) patients from control group did not receive any yoga interventions. Classes were free of cost for all the participants. Both groups were evaluated at the beginning and after 3 months using visual analog scale (VAS).

Assessment

The collected data was statistically analyzed by ANCOVA test.

Test of Significance

This is the crucial portion of this thesis, where we arrive at the conclusion by examining the conjecture. The procedure of experiment is based on the results obtained along with the level of confidence which was fixed at 0.05. This was considered essential for this study.

The experiment is known as the test of significance where the test scores of the samples are noted before and after the test and their difference is evaluated and categorized as significant or not significant. In the present study, the conjecture is categorized based on the difference between the obtained F-ratio and the table F-ratio at 0.05 level. In the first case, where the former is greater than the latter, it is categorized as accepted as there is a significant difference between the means of compared groups. In the other case where the relation between the former and the latter is vice versa of the previous case, the conjecture is rejected as there is no significant difference between the means of groups under study.

Level of Significance

To research the above results on all the variables, level of significance 0.05 was selected and regarded as essential for this study.

Computation of Analysis of Covariance

The following tables illustrate the statistical results of the effect of simplified kundalini yoga (sky) on neck pain patients.

Table 1: Computation of analysis of Covariance - mean of SKY and Control groups on Neck Pain.

	SKY Group	Control Group	Source of Variance	Sum of Squares	df	Means Squares	F-ratio
Pre-Test Means	5.48	5.04	BG	2.42	1	2.42	1.12
			WG	103.20	48	2.15	
Post-Test Means	1.48	4.24	BG	95.22	1	95.22	41.25*
			WG	110.80	48	2.30	
Adjusted Post-Test Means	1.30	4.41	BG	117.45	1	117.45	113.15*
			WG	48.78	47	1.03	

(Table Value for 0.05 Level for df 1 & 48 = 4.04) df- Degrees of Freedom
 (Table Value for 0.05 Level for df 1 & 47 = 4.05)

Results of Neck pain

An examination of table indicated that the pre-test means of SKY and control groups were 5.48 and 5.04 respectively. The obtained F-ratio for the pre-test was 1.12 and the table F-ratio was 4.04. Hence the pre-test mean F-ratio was insignificant at 0.05 level of confidence for the degree of freedom 1 and 48.

The post-test means of the SKY and control groups were 1.48 and 4.24 respectively. The obtained F-ratio for the post-test was 41.25 and the table F-ratio was 4.04. Hence the pre-test mean F-ratio was significant at 0.05 level of confidence for the degree of freedom 1 and 48.

The adjusted post-test means of the SKY and control groups were 1.30 and 4.41 respectively. The obtained F-ratio for the adjusted post-test means was 113.15 and the table F-ratio was 4.05. Hence the adjusted post-test mean F-ratio was significant at 0.05 level of confidence for the degree of freedom 1 and 47. The pre, post and adjusted post-test mean values of SKY and control groups, on back pain are

graphically represented in the figure-1.

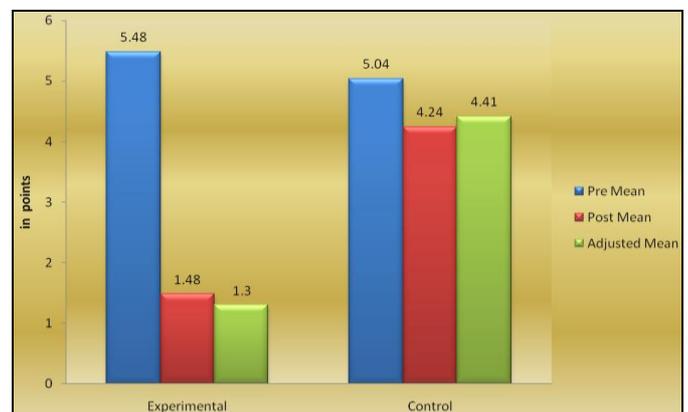


Fig 1: Pre-test and adjusted post-test differences of the SKY and Control groups on neck pain

Discussion

There was a significant improvement in the health of the participants of experimental group according to the results. Wear and tear in the neck joints and surrounding regions is termed as cervical vertebral ankylosis. Men and women above 25 years of age are affected by this condition and it advances with age. People with obesity, heavy lifting occupations, quick bending and twisting activities, arthritis, genetic influences, sedentary lifestyle, osteoporotic fractures are more prone to this condition. Neck muscles, diaphragm and nervous system stores the tension caused by stress. Reports show that the presence of distressful symptoms forecasts musculoskeletal disorders in the years to come. Spasms caused by stress, can paralyze the synchronized functioning of muscle groups in the neck region. If proper relaxation techniques are followed, the stress can be reduced. Gender, physical health and the state of the disorder must be considered while applying Simplified Kundalini Yoga practices.

The aspects of lifestyle modification, diet, way of thinking also plays a vital role in alleviating neck pain. Yoga though present for ages is recently progressing as a fruitful therapy in physical and mental disorders. Anxiety, tension, stress, mood changes and depression are the prime factors in neck pain. This indicates a clear association between cognitive factors and neck discomfort.

Conclusion

The findings of the study show that SKY practices such as simplified exercises have significant influence on neck pain patients by increasing flexibility of the joints, relaxing the muscle contraction and reducing stress. It also depicts that meditation has positive results by decreasing the anxiety and improve self-confidence and increase in efficiency to perform daily activities.

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