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Influence of selected yogic asanas on joints movement

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Abstract

Purpose of this study was to examine an influence of selected yogasanas on the improvement of Joint movement at ankle, knee, hip and wrist. The young players need flexibility, ability, strength etc. The subjects were 30 male school student players. Ages ranged between 15 to 19 years were receiving yogic asanas of the subject, in Durbachati J.N.A. Sikshaniketan in south 24 paraganas, India. The subjects were equally divided by randomization into two groups, Yoga and Control. Measurement of quantities on range of movement with standard equipment for some joints were taken in the beginning and at the end of 3 months. Range of movement was measured using a physical test. For the statistical analysis, t-test was used to compare the pre data with the data recorded after three months. The level of significance chosen was 0.05. the level of range of movement in experimental group was found higher in comparison to the control group. This results suggests that yoga practice is beneficial in enhancement of range of movement in subjects were male school student players that will definitely help in other physical benefits too.

Keywords: Yogasana, joints movement

Introduction

Background:

The word yoga means 'union'. Etymologically it comes from Sanskrit root 'Yuj which meaning to bind, join, attach and yoke, and to direct concentrate one's attention^[1, 2]. Regular yogic activity improve strength, endurance, flexibility, ability and control at various emotions like lust, love, affection, anger, greediness, while cultivating a sense of calmness and well-being^[3, 4].

Yogasana improving the flexibility and hand reaction time on general population^[5]. In Yogic activity is a caring of bodily movement with mental concentration. Yogic activity can help a person to improve his health along with control of emotions and physical wellness. Yoga is therapy also^[6]. Resulted that the Yoga group showed significant improvement in overall flexibility as a result of systematic training of Vinyasa Sun Salution, whears non yoga group did not show any significant improvement. Asanas are physical activity allowing the body to be physically fit. Physical education play an important role in healing the pupils to maintain a slim and youthful body. Asonas are kept important point to realize before starting the practice of yoga^[7].

Asanas are scientific postural pattern it capet the body to be physically fit. These exercises in physical education play and important part in healing the pupils to maintain a slim and youth full body. Several test and experiment as have been conducted to know the values and importance of asana^[8]. Yoga therapy increased muscular strength, flexibility, range of motion, mobility relaxation, energy and sense of well-being. It is improved sleep quality, balance reduction of stress, pain and control over physiological parameters are the accepted benefits^[9-14].

A study of Effect of a one-month yoga training program on performance in a mirror-tracing task. The performance in a mirror star tracing task was assessed in two groups of volunteers (yoga and control) with 26 people in each group, and age range between 18 and 45 years. The star to be traced was six pointed and the outline was made up of 60 circles (4mm in diameter).At the end of one month the yoga group showed a significant improvement in terms of an increase in the number of circles crossed ($p < 0.001$, wilcoxon paired signed ranks test) for both hands and a decrease in the number of circles left out for the right hand ($P < 0.05$).

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The control group showed a significant increase in number of circles crossed for the left hand alone ($P < 0.05$) at the end of a month attributed to re-test. The study suggests that one month of yoga improved reversal ability, eye-hand co-ordination, speed and accuracy which are necessary for mirror start racing [15]. The effects of yoga and physical activity programs on depth perception in school children. Compares the effect of two programs (yoga and physical activity), each of one-month duration on depth perception. Thirty two girls (aged between 10 and 11 years) in a residential school were matched as pairs for age and randomly assigned to the two groups. The groups practiced the assigned interventions as 75 minutes every day for 7 days a week. Depth perception was assessed using a standard device measuring errors in 5 trials per subject. At the end of the month. The significant improvement in the yoga group in depth perception compared to the physical training group, was speculated to lower anxiety levels which have been proven to be related with better visual perception [16]. Sample used in the first project two groups Via. Experimental and control containing 30 subjects in each were selected from the total 84 pupils of IX standard of local collage. They were matched for age, intelligence and initial memory scores. In the second project student of SCCC 1972-73 males and females (22 males and 15 Females For 1973) were selected. The experimental Group was trained for a period of 3 weeks in the following asanas-Ardha halasana, Viparitakarni, Ardha Shalabhasana, Dhanurasana, Yoga mudra, Vakrasana, Bhujangasana, Chakrasana, Ujjayipranayama-inhalation and exhalation in the ratio of 1:2 and shavasana. While in the second project subjects were trained in the asanas for a period of three weeks as preserved in the NFC 2 syllabuses. Dr.

Harish Chandra Kocher found favorable result that short term yogic training programmer contributes to improve the immediate memory [17]. This study was designed to develop an intervention plan based of yogasana on male inter school tournament players for the Range of some joints movement level.

Material and Methods

Participants

The subjects for this study were selected from Durbachati J.N.A. Sikshaniketan in south 24 paraganas, India. The subjects were 30 male inter school tournament players. They were Ages ranged between 15 to 19 years were receiving yogic asanas of the subject. The subject were equally divided into two groups-yoga and control.

Measurements

Ankle joint (planar flexion), knee joint, hip joint, wrist joint (downward flexion) were measured with the help of Goniometer in degree.

Interventions

The yogic asanas practices were scheduled to administer for 3 months, Monday to Saturday every week in the evening session. The practice sessions were conducted and supervised by the researcher himself. Asanas were selected to enhance stretch ability of muscles and for improving mobility of joints. Each asana was explained and demonstrated before the students performed the same, for the teaching purpose. Practice Scheduled were as follows depicted in Table -1.

Table 1: Practice Scheduled of Asanas

Sr. No.	Name of Asana	1 st month		2 nd month		3 rd month	
		Duration (sec)	Repetition	Duration (sec)	Repetition	Duration (sec)	Repetition
1	Vajrasana	5-6	2	7-10	3	11-18	3
2	Ustrasana	6-8	2	8-10	2	11-15	3
3	Aakorna dhanurasana	4-5	3	7-10	4	11-15	4
4	Paschimutonasana	4-5	2	8-10	3	11-15	3
5	Matsendrasana	3-4	3	7-10	4	12-15	4
6	chakrasana	3-4	4	8-10	5	11-15	6
7	Dhanurasana	4-5	3	8-10	4	11-15	4

Statistical Analysis and Results

According to the statistical analysis and result table mentioned below. The level of joints in range of movement in

experimental group was found higher (significant at 0.05 levels) in comparison to the control group. The result has been presented in table-2.

Table 2: Comparison between the Pre and Post-test means of range of movement of experimental group’s 4 joints (in degrees)

Dependent Variables	Pre-training		Post-training		t-ratio
	Mean	S.D.	Mean	S.D.	
Ankle Joint	61.46	8.65	65.33	8.82	12.66*
Knee Joint	100.53	9.00	105.13	9.43	9.94*
Hip Joint	47.66	6.40	53.60	7.04	11.19*
Wrist Joint	69.53	5.77	76.87	5.73	12.66*

*Significant at 0.05 level of significance. Tabulated value (5% for 14 d.f.) is 2.145

The table -2 reveal that the calculated t-value i.e. 12.66, 9.94, 11.19 and 12.27 are respectively greater than the tabulated t-value of 2.145 for the 14 degree of freedom.

The difference of means are graphically depicted below in Figure -1.

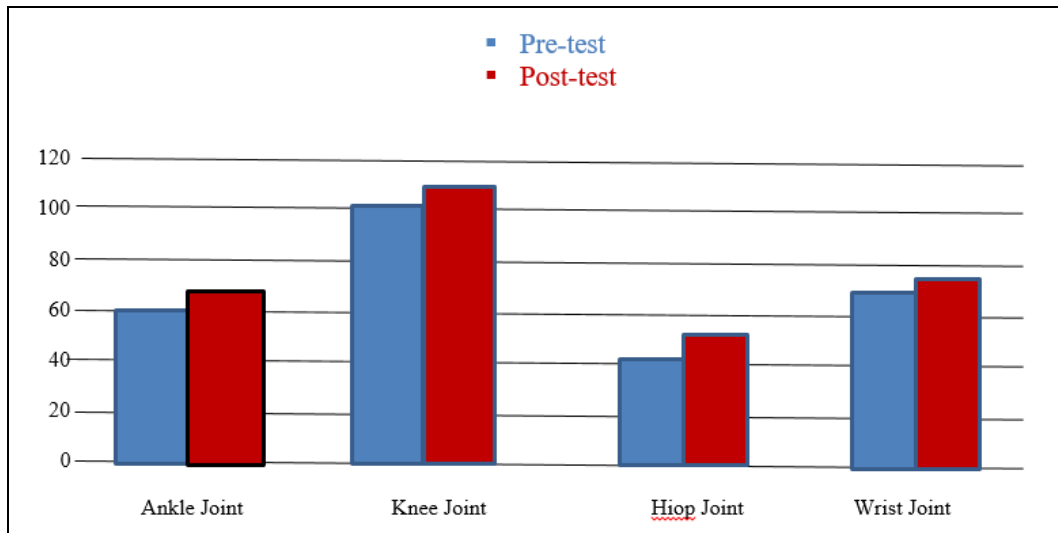


Fig 1: Significant difference between pre and post training mean

Discussion

A study by failed to find any difference between yoga and exercise group while studying the effects of yogic practices, but the cognitive tools used were not comprehensive. Similar to a previous randomized control study [18].

In addition to lending support to these evidences, my study shows effects of yogic asanas improvement in range of movement at ankle, knee, hip and wrist joints.

Summary and Conclusion

On the basis of the results of the present study and on the basis of findings it is says that yogic asanas are effective in improving the range of movement of different joints and it will definitely help in other physical benefits too.

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