



# EFFECTS OF YOGA PRACTICE ON THE MUSCULAR STRENGTH AND MUSCULAR ENDURANCE OF NATIONAL KABADDI PLAYERS : A PILOT STUDY

**Ajinkya Chavan**

Phule Nagar , Nanded (Maharashtra)

**Abstract :** The aim of the study is to determine the Effects of Yoga Training on Muscular Strength and Muscular Endurance of Kabaddi Players, Two groups were targeted; experimental and control group; 15 Kabaddi players considered as experimental group and 15 other than Kabaddi players considered as control group. The training programme was only given to experimental group. The age of the subjects were ranged between 15 to 25 year Pre and Post-tests were applied on experimental group's Muscular Strength and Muscular Endurance. Muscular Endurance was evaluated by using 1 minute Bent Knee Sit Up test. Abdominal muscular endurance was measured by performing the 1-minute bent knee sit-up test. Muscular strength was measured by using Kraus Weber Strength Test. Kraus Weber Strength Test made up by combining six physical activities or tests. The result shows that there were significant difference was found in pre and -post test of Muscular Endurance ( $t < .05$ ) and Muscular Strength ( $t < .05$ ) on experimental group. The findings of the study revealed that there was significant effects of 03 week Training Programme (Yoga Training) on found on Muscular Strength and Muscular Endurance of Kabaddi Players

## INTRODUCTION

Kabaddi, is a contact sport, native to the Indian subcontinent. It is one of the most popular sports in India, played mainly among people in villages. India has taken part in four Asian Games in kabaddi, and won gold in all of them. Muscular strength can be defined as the ability to exert force in order to overcome resistance. Strength is the extent to which muscles can exert force by contracting against resistance (e.g. holding or restraining an object or person) Power - the ability to exert maximum muscular contraction instantly in an explosive burst of movements. muscle endurance is doing less repetitions with more weight will help you increase your strength. Doing more repetitions with lighter weights will help you build up endurance. And the truth is, in the real world, you need both and use both in your everyday life. The Kabaddi game involve agility, good lung capacity, muscular co-ordination, presence of mind and quick responses. For a single player to take on seven opponents is no mean task, requires dare as well as an ability to concentrate and anticipate the opponent's moves. Yoga can provide both physical and mental benefits, including increased strength and lung capacity on the physical side and enhanced focus in the mental arena. Yoga allows athletes to become more aware of what's happening in their bodies so that they can better identify potential problems and prevent injury. Yoga has a wealth of benefits for athletes, and it's worth trying if you want to gain strength, flexibility, and balance. It may help improve your range of motion, mobility, and coordination, all of which can boost your performance and prevent injury.

## METHODOLOGY

Two groups were targeted; experimental and control group; 15 Kabaddi players considered as experimental group and 15 other than Kabaddi players considered as control group. The training programme was only given to experimental group. The age of the subjects were ranged between 15 to 25 years. The data was collected through respondents in the form of different experimental tests. The demographic information about Gender, age, daily smoking, drug use, etc. was obtained before seeking responses. The research design was experimental research design.

## ADMINISTRATION OF TESTS

Pre and Post-tests were applied on experimental group's to Muscular Endurance was evaluated by using 1 minute Bent Knee Sit Up test. Abdominal muscular endurance was measured by performing the 1-minute bent knee sit-up test. Muscular strength was measured by using Kraus Weber Strength Test. Kraus Weber Strength Test made up by combining six physical activities or tests. Obtained data was collected from the 15 Kabaddi players those participated in

experimental group. Similarly obtained data was collected from 15 Kabaddi players those participated in control group. Training was only given to those students who participated in experimental group.

**TRAINING PROGRAMME**

Training programme was planned as 12 weeks, 5 days a week &, 60 minutes per day in morning sessions.. The Surya Namaskar,Padmasana (the lotus pose), Vajrasana (the thunderbolt pose), Trikonasana (the triangle stretch pose), Navasana (The Boat pose), PadaHastasana (the forward bending pose), Halasana (the plough pose), Matsyasana (the fish pose), Bhujangasana (the cobra pose), Shalabhasana (the locust pose ) , and six circuit training exercise were performed.

**RESULT AND DISCUSSION**

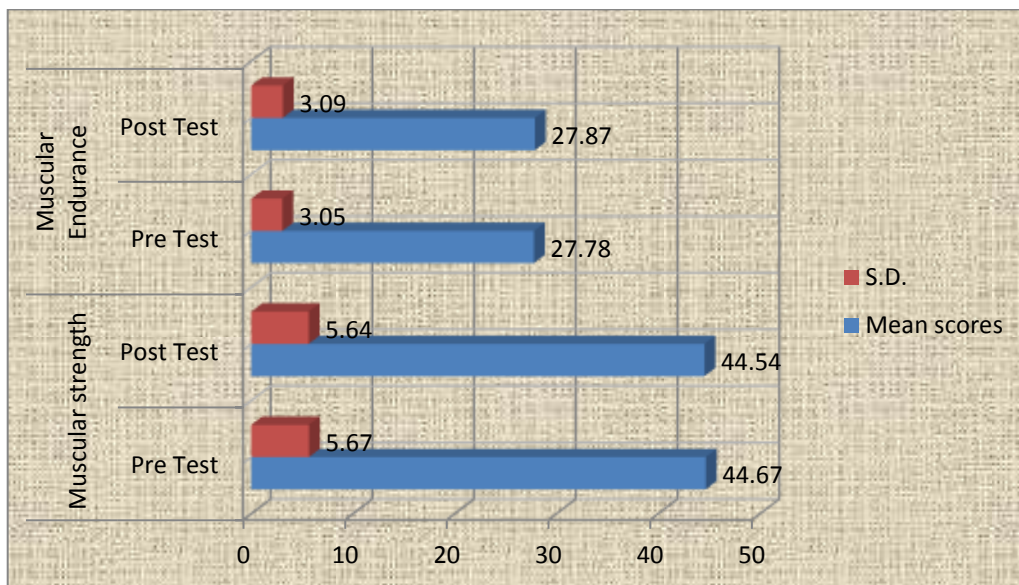
The present section is dedicated to the presentation of results along with the discussion of present study. The results and discussion have been presented in console comprehensive manner that is easy to comprehend starting with selected variables

**TABLE -1  
PRE AND POST TEST OF MEAN SCORES AND STANDARD DEVIATION WITH T-RATIO OF MUSCULAR STRENGTH AND MUSCULAR ENDURANCE OF CONTROL GROUP**

Parameter	Stages	Numbers	Mean scores	S.D.	t-ratio
Muscular strength	Pre Test	15	44.67	5.67	1.68 NS
	Post Test	15	44.54	5.64	
Muscular Endurance	Pre Test	15	27.78	3.05	1.66 NS
	Post Test	15	27.87	3.09	

Table 1 depicted Mean Scores, Standard Deviation and t-ratio of pre and post-test of muscular strength and Muscular endurance . With regards to mean score of pre and post of Muscular Endurance of control group were obtained 27.77 and 27.88 , However, the Standard Deviation of pre and post of Muscular Endurance of control group were obtained 3.05 and 3.09 respectively. The result given in Table 1 reveals that no significant difference of Muscular Endurance was found between pre and post-test of control group .With regards to mean score of pre and post of Muscular strength of control group were obtained 44.67 and 44.54 , However, the Standard Deviation of pre and post of Muscular strength of control group were obtained 5.67 and 5.64 respectively. The result reveals that no significant difference of Muscular strength was found between pre and post-test of control group .

**Figure 1 shows the Mean Scores and Standard Deviation of pre and post-test of muscular strength and Muscular endurance of control group.**

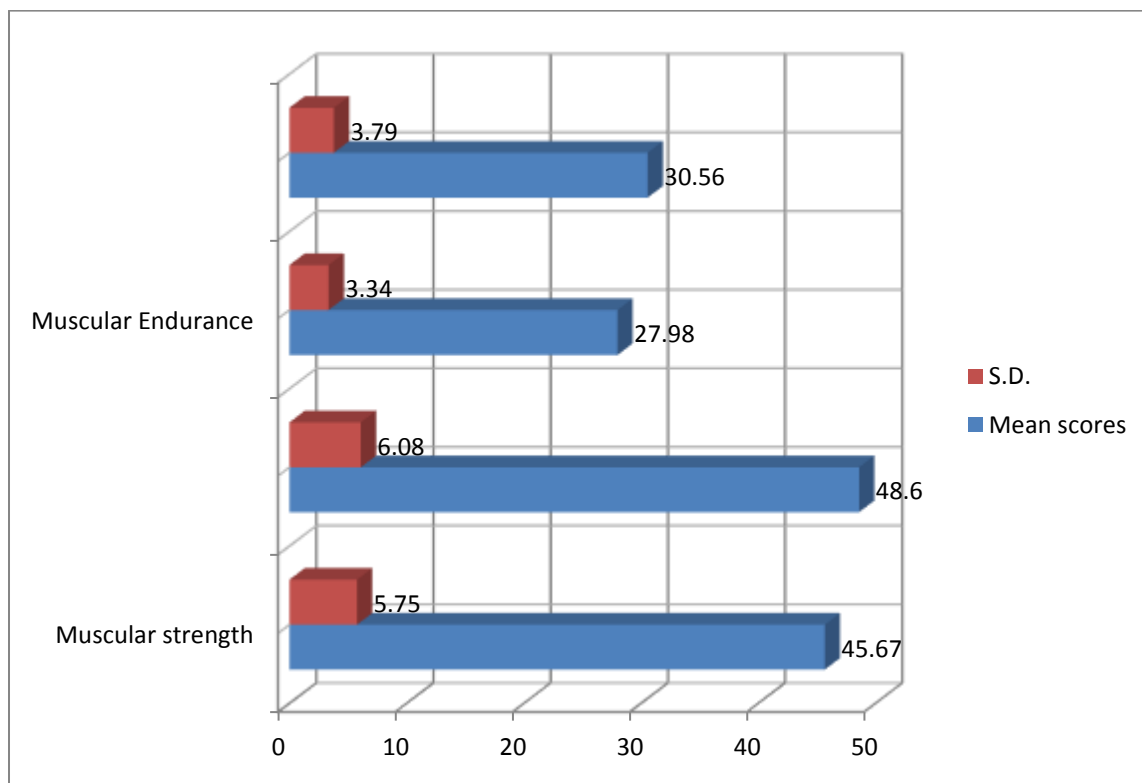


**TABLE-2**  
**PRE AND POST TEST OF MEAN SCORES AND STANDARD DEVIATION WITH T-RATION OF MUSCULAR STRENGTH AND MUSCULAR ENDURANCE OF EXPERIMENTAL GROUP (KABADDI PLAYERS)**

Parameter	Stages	Numbers	Mean scores	S.D.	t-ratio
Muscular strength	Pre Test	15	45.67	5.75	3.31*
	Post Test	15	48.60	6.08	
Muscular Endurance	Pre Test	15	27.98	3.34	3.34*
	Post Test	15	30.56	3.79	

Table 2 depicted Mean Scores, Standard Deviation and t-ratio of pre and post-test of muscular strength and Muscular endurance. With regards to mean score of pre and post of Muscular Endurance of Experimental group ( Kabaddi Players) were obtained 27.98 and 30.56, However, the Standard Deviation of pre and post of Muscular Endurance of Experimental group ( Kabaddi Players) were obtained 3.34 and 3.79 respectively. The reveals that significant effects of circuit and yoga training on Muscular Endurance was found between pre and post-test of Experimental group ( Kabaddi Players) .With regards to mean score of pre and post of Muscular strength of Experimental group ( Kabaddi Players) were obtained 45.67 and 48.60 , However, the Standard Deviation of pre and post of Muscular strength of Experimental group ( Kabaddi Players) were obtained 5.75 and 6.08 respectively. The result reveals that significant effects of yoga training on Muscular strength was found between pre and post-test of Experimental group ( Kabaddi Players) .

**Figure 2 shows the Mean Scores and Standard Deviation of pre and post-test of muscular strength and Muscular endurance of experimental group.**



**Discussion**

The findings of the study showed that significant effects of yoga training on Muscular strength and muscular endurance was found between pre and post-test of Experimental group Kabaddi first got international exposure at the 1936 Berlin Olympics. It was also introduced at the Indian National Games held in Calcutta in 1938. The All India Kabaddi Federation (AIKF) was created in 1950 which gave the sport nationwide recognition. According to Nielsen Sports, interest in Kabaddi has grown by 14% year-over-year since 2015, while interest in the Pro Kabaddi League has



grown by 33%, making it the second-most popular and watched sports league on TV in India after the Indian Premier League. Much research supports the notion that greater muscular strength can enhance the ability to perform general sport skills such as jumping, sprinting, and change of direction tasks. Greater muscular strength allows an individual to potentiate earlier and to a greater extent, but also decreases the risk of injury . Greater muscular strength is strongly associated with improved force-time characteristics that contribute to an athlete's overall performance. ... Greater muscular strength allows an individual to potentiate earlier and to a greater extent, but also decreases the risk of injury . Many who practice yoga consistently are able to lift the weight of their own body with ease. If you're looking to build strength, consider either ashtanga, power, or rocket yoga. yoga increases muscle strength, power, and endurance through weighted exercises. By holding the body in specific poses, yoga helps to improve balance, strength, and stamina. Practicing yoga asanas can improve circulation, digestion, balance, flexibility, and agility. The underlying purpose of muscular endurance is to improve performance in your sport and exercise activities. By improving your muscular endurance, you improve your muscles' capabilities to support your daily activities, as well as your performance in sports and exercise.

### REFERENCES

- Clausen J P (1977) "Effects of physical training on cardio vascular adjustments to exercise in man." *Physiol Rev.* 57(4):779-815
- Dubbert PM (2002) "Physical activity and exercise: recent advances and current challenges. *Journal of Consulting and clinical psychology.*"70:526-536. Dio: 10.1037/0022-0066X.70.3.526.
- Huang YC, Malina RM (2007) "BMI and health- related physical fitness in Taiwanese youth 9-18 years." *Med Sci sports Exerc,* 39(4):701-708.
- J Bharti (2010) "Effects of endurance training on school boys." Unpublished M.P.Ed. Dissertation, Swami Ramanand Teerth Marathwada University Nanded.
- Jackson J, Sharkey B, and Johnston L (1979) "Cardio respiratory adaptations to training at specified frequencies." *Res. Q.* 39:295-300.
- Kwok Kei Maket. al., (2010) "Health related physical fitness & Weight status in Hong Kong adolescents *BMC public health*", 10:88.
- Lamb KL, Brodie DA, Roberts K (1988) "Physical fitness and health-related fitness as indicators of a positive health state." *Health PromotInt* 3:171-182.
- Malina RM (2007): "Physical Fitness of children and adolescents in the United States: Status and secular change". *Med sports sci.*, 50:67-90.
- Orjan E, Kristjan O, Bjorn E (2005): "Physical performance and body mass index in Swedish children and adolescents" *Scand J Nutr*, 49(4):172-179.