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EFFECTIVENESS OF SELECTED YOGASANA-S PRACTICES ON AGILITY AND SPEED OF THE PUNJAB ENGINEERING COLLEGE (DEEMED TO BE UNIVERSITY) VOLLEYBALL PLAYERS

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ABSTRACT

The main objective of the study was to determine the effect of selected Yogāsana-s training on the agility and speed of Punjab Engineering College (Deemed to be University) volleyball players. All the Volleyball players for this study were selected from Punjab Engineering College (Deemed to be University), Chandigarh. A total of 24 students were randomly selected and divided into a control and experimental group for the study. The control group Volleyball players continued with their routine exercises and the experimental group Volleyball players were given training in selected Yogāsana-s for Eight weeks in addition to their routine exercises. Yoga plays a vital role in creating physical, mental, emotional, and spiritual well-being. The Yogic training helps in the all-round development of a human being and also concentrates on Physical, Mental as well as Spiritual Health. In Yogic training, we follow an Aṣṭāṇayoga (Eighth folded path) i.e. Yama, Niyama, Āsana, Prāṇāyāma, Pratyāhāra, Dhārṇā, Dhyāna, and Samādhi. Yogāsana is a stable and comfortable posture. There is a considered variety of spinal column movement i.e forward and backward bending and many more that are performed dynamically in synchrony with the breath. Speed is considered as the rate of motion, or equivalently the rate of change of distance. Agility is the ability to change the Body's position and requires a combination of balance, coordination, speed, reflexes, strength, endurance, and stamina. SPSS was used to conclude the statistical analysis of the study. The findings were that there exists a statistically significant difference in the component of agility of the controlled group and experimental group after the introduction of the intervening variable. A significant difference was also seen among the speed values in the experimental group according to the pre-test and post-test scores. The final finding suggested that it can be seen that Yogāsana-s training has a statistically significant effect on agility and speed level in the Volleyball practices performance.

Keywords *– Yogāsana-s, Agility, Speed, Volleyball.*

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INTRODUCTION:-

Yoga is an ancient scientific tradition and perfect humanistic spiritual science to integrate the physical, mental, moral, spiritual and overall holistic development through many years of study and inner experience. People practice Yoga for body and mental health and not for spiritual experience. A variety of Yogic paths are there for different human needs and temperaments, which all can assist in liberation of potential and creativity of human potential and creativity. Yoga is traditionally defined as the union of individual with consciousness, a way to balance or harmonize the Mind Body and emotions which can be achieved by the practice of Satkarma (Yogic cleansing), Asana (Yogic Postures), Pranayama (Yogic Breathing), Mudra (Psycho Physiological Yogic energy) and Dhyana (meditation). Yogic practices can enhance the skills and efficiency in action which increases the expression of higher creativity levels and gives positivity in life.

Yogāsana is the practice of physical *Yogic* postures and *Mahaṛiṣi Patañjali* explained ***"Sthirasukhāsanam"*** *(P.Y.S. II. 46)* which means *Āsana* is stable and comfortable posture. The practice of moving the Body into particular *Yoga* postures that implies most underlying is improved Health, strength, balance, and flexibility. On a deeper level the practice of *Āsana,* which means "staying", is used as a tool to calm the mind and move into the inner essence of being. *Mahaṛiṣi Patañjali* explains, "***Prayatnaśaithiliyanantasamāpattibhyām"*** (*P.Y.S.* II.47) about the effect of *Āsana* with a pearl of subjective experiential wisdom. This means that perfection of the body reflects the beauty of form, grace, strength, compactness, and maintains the various parts of the body as hard as a diamond and if the occasion arises as soft as a petal. *Haṭhayoga* also propounds a similar concept. *Yogāsana-s* have been classified into standing poses, sitting poses, balancing poses, meditative poses, supine lying poses, prone lying poses and reparative poses. Practice of *Yogāsana-s*is the best way to improve the fitness components especially flexibility. There are plenty of studies that have been conducted to see the effect of *Yogāsana-s*on flexibility. Going through many research papers this query has arisen to find how volleyball players can improve their performances and how much time needed for significant improvement in their performance. The objective of the study was to determine the effectiveness of 8 weeks *Yogāsana-s*training on the agility and speed component of volleyball players.

METHOD-

SUBJECTS: The study subjects were selected from the Punjab Engineering College (Deemed to be University), Chandigarh. 24 volleyball players in the age group of 18 – 23 were selected randomly for this study. They were all involved in exercise regularly, they did not have any health-related problem and they had no injury also.

VARIABLES: *Yogāsana-s* was considered as an independent variable and agility and speed were considered as dependent variable.

TESTING OF PHYSICAL FITNESS COMPONENTS:

TEST FOR SPEED: Speed of the subject was measured by flying 30 meters test. Initially, the Subject was asked to relax and calm down which was followed by 10 minutes warm-up. The examiner marked 3 points with existing of cons from point A to Point C covering 60 meters straight Whereas point A to point B cover the distance i.e. Mid-Point. The subjects started the race with the commands of "Go" and the examiner noted down the reading of the time taken to cover the distance Point A to Point B, Point B to Point C from each individual player. The reading of the score and time was taken two times and the best score was recorded.

TEST FOR AGILITY: The agility of the subject was measured by the Illinois Agility Test. First described by Getchell (1979) and it is widely used for the general agility tests. The subjects were asked to be relaxed and instructed the rule of the test. The course length is 10 metres and width (between the start and the end points) is 5 meters. The start, finish and the two turning points are marked by four cones. Another four cones were placed in the center equal distance apart (i.e. 3.3 meters apart) Then, the subjects conducted a warm-up for 10 mints. After that the subject has to lie on their front (head towards the start line) and hands placed by their shoulders. When the 'Go' command is given the stopwatch is started and the subject has to get up as quickly as possible and has to run around the course in the indicated direction, without knocking over the cones, and once the subject reaches the finish line the timing is stopped.. The score was expressed in a number of seconds. Three trials were given and the highest score was recorded.

EXPERIMENTAL DESIGN

YOGĀSANA-S TRAINING PROGRAM: The pre and post-test measures design was used for this study. The training program was applied to volleyball players. There were 15 *Yogāsana-s* selected in the training program. These *Yogāsana-s* practices were applied to the subjects of the experimental group as an addition of their exercises for 4 days a week. Only one group of 12 subjects was selected. The total treatment duration was eight weeks. The practice of the *Yogāsana-s* exercises in the program started with 2 repetitions of each *Yogāsana-s* with 10 seconds holding and repetition of *Yogāsana-s* was the same but the holding time was increased by 10 seconds each week. When the subjects arrived at week 8, they had practiced each of *Yogāsana-s* as 2 repetitions with 80 seconds hold. Thereafter, the test took place before and after the 8-week *Yogāsana-s* training.

TABLE - LIST OF 15 *YOGĀSANA-S.*

Sr. No.	**Trials *Yogāsana-s* Training Schedule Movement**	**1st week Each *Āsana* - 2 repetition**	**2nd week Each *Āsana* - 2 repetition**	**3rd week Each *Āsana* - 2 repetition**	**4th week Each *Āsana* -2 repetition**	**5th week Each *Āsana* -2 repetition**	**6th week Each *Āsana* -2 repetition**	**7th week Each *Āsana* -2 repetition**	**8th week Each *Āsana* -2 repetition**
1.	Tadasana (Palm tree pose)	10 second	20 second	30 second	40 second	50 second	60 second	70 second	80 second
2.	Padhastasana (Hand to foot pose)	10 second	20 second	30 second	40 second	50 second	60 second	70 second	80 second
3.	Trikonasana (Triangle pose)	10 second	20 second	30 second	40 second	50 second	60 second	70 second	80 second
4.	Virbhadrasana-1st (Warrior Pose – 1st)	10 second	20 second	30 second	40 second	50 second	60 second	70 second	80 second
5.	Virbhadrasana-2nd (Warrior Pose – 2nd)	10 second	20 second	30 second	40 second	50 second	60 second	70 second	80 second
6.	Virbhadrasana-3rd (Warrior Pose – 3rd)	10 second	20 second	30 second	40 second	50 second	60 second	70 second	80 second
7.	Utkatasana (Chair Pose)	10 second	20 second	30 second	40 second	50 second	60 second	70 second	80 second
8.	Natrajasana	10	20	30	40	50	60	70	80

	(Dancer pose)	second	second	second	second	second	second	second	second
9.	Bharadasana (Gracious pose or Butterfly pose)	10 second	20 second	30 second	40 second	50 second	60 second	70 second	80 second
10.	Parvatasana (Mountain pose)	10 second	20 second	30 second	40 second	50 second	60 second	70 second	80 second
11.	Bhujangasana (Cobra pose)	10 second	20 second	30 second	40 second	50 second	60 second	70 second	80 second
12.	Dhanurasana (Bow pose)	10 second	20 second	30 second	40 second	50 second	60 second	70 second	80 second
13.	Chakrasana (Wheel pose)	10 second	20 second	30 second	40 second	50 second	60 second	70 second	80 second
14.	Srvangasana&Shirasana (Shoulderstand pose & headstand pose)	10 second	20 second	30 second	40 second	50 second	60 second	70 second	80 second
15.	Shavasana (Corpse pose)	10 second	20 second	30 second	40 second	50 second	60 second	70 second	80 second

The participants were briefly introduced about the objectives and requirements of the *Yogāsana-s*. *Yogāsana-s* 8 weeks training was carried out, four days per week. The scheduled time of practice lasted for 30-40 minutes. Each day of the first week, *Yogāsana-s* practice was demonstrated to the group by the expert and most important points were reviewed several times. Afterward, a review of the most important and common mistakes was conducted once per week. The study was done to determine the effect of *Yogāsana-s* on agility and speed of volleyball players.

RESULT

SPSS the package was used for the statistical analysis of the data. The mean error of 0.05 was accepted for statistical methods.. The mean values and standard deviation are shown in table 1

TABLE 1 DESCRIPTIVE STATISTICS OF AGILITY TEST AND SPEED TEST OF CONTROL GROUP AND EXPERIMENTAL GROUP

Variables	Controlled group					Experimental group				
	N	Pre-test		Post-test		N	Pre-test		Post-test	
		x	sd	x	sd		x	sd	X	sd
Agility test	11	17.47	.584	17.24	.794	11	17.29	.964	15.96	.804
Speed test	11	3.477	.348	3.470	.286	11	3.721	.538	3.120	.190

In table 1, it was observed that a significant difference between the post-test value of a controlled and experimental group of agility test and it also seem that a significant difference between post-test value of control and experimental group of speed tests which means *Yogāsana-s* play a significant role in the performance of the volleyball players.

TABLE 2 COMPRISING PRE-TEST AND POST-TEST T-VALUE OF AGILITY AND SPEED OF EXPERIMENTAL GROUP

Variables	Experimental Group			
	N	X	SD	t-value
Agility Test (Pre-test)	11	17.29	.964	3.889
Agility Test (Post-test)	11	15.96	.804	
Speed Test (Pre-test)	11	3.721	.538	3.736
Speed Test (Post-test)	11	3.120	.190	

Here, in table 2, the Experimental group t-value score of the agility test shows a 3.889.There is a significant pre and post difference between the scores. That shows the positive effect of *Yogāsana-s*training in the performance of volleyball players. We can say it's improving the volleyball player's performance. On the other hand in speed test t-value score also a significant difference in pre-test and post-test. It shows that the time duration was decreased which means volleyball players was started to run fast from pre-test scores. It's also providing a significant positive effect on their performance.

TABLE 3 COMPRISING PRE-TEST AND POST-TEST T-VALUE OF AGILITY AND SPEED OF CONTROLLED GROUP

Variables	Control Group			
	N	X	SD	t-value
Agility Test (Pre-test)	11	17.47	.584	1.307
Agility Test (Post-test)	11	17.24	.794	
Speed Test (Pre-test)	11	3.477	.348	.072
Speed Test (Post-test)	11	3.470	.286	

Here, in table 3, the control group t-value score of the agility test show a 1.307. It was not observed any significant difference between a pre-test score and post-test score. On the other hand in speed test t-value score did also not seem a significant

difference in pre-test and post-test. That means there is no difference in the performance of the volleyball players.

TABLE 4 COMPRISING PRE-TEST AND POST-TEST OF AGILITY AND SPEED VALUE OF CONTROLLED AND EXPERIMENTAL GROUP

Variables			N	X	SD	t-value
Agility Test	**Pre-Test**	**Control Group**	11	17.47	.584	.635
		Experimental Group	11	17.29	.964	
	Post-Test	**Control Group**	11	17.24	.794	4.369
		Experimental Group	11	15.96	.804	
Speed Test	**Pre-Test**	**Control Group**	11	3.477	.348	-1.234
		Experimental Group	11	3.724	.538	
	Post-Test	**Control Group**	11	3.470	.286	3.966
		Experimental Group	11	3.120	.190	

Table 4 shows that no significant difference between pre-test scores of the agility test and speed test of the control group and the experimental group. Here we can say every volleyball player's performance was the same and there is no big difference was seen. Whereas in post-test scores, there is a significant difference in the t-value of the agility test and speed test of the control group and experimental group. This shows that no improvement took place in the performance of the control group volleyball players whose do not provide treatment or practice of *Yogāsana-s*. This indicated that the 8 weeks practice of *Yogāsana-s* is sufficient to bring a significant improvement in the performance of the volleyball players.

DISCUSSION

The study purpose was to determine the effectiveness of eight weeks Yogāsana-s training on agility and speed on Punjab Engineering College (Deemed to be University) volleyball players. The study finding showed an improvement in the agility and speed in the performance of the volleyball players due to the regular practice of Yogāsana-s. From Yogāsana-s point of view, muscle length which can be stretching and modified is the primeval method by which muscle lengthening can occur. A muscle has two ends

the start and the insertion point, at each end of the muscle, tendon attaches the muscle to the bone. Stretching which moves the two ends of the muscle further apart lengthen the muscle and the tendons and thus maintains this muscle length for a long term. Visco-elastic property has existed in the muscle. This basically means that it is not as much elastic as a rubber band. However over time, when the muscles are stretched they experience creep which means they gradually get longer and thus increase the performance of the volleyball players.

In study pair wise comparison shows that the duration of eight weeks of treatments was sufficient to bring out significant different (improvement) in agility and speed components and also shows that the short duration treatment was not effective enough to bring about any significant difference, while a significant difference was noted after at least eight weeks of treatment. In this way present study confirmed that practices of Yogāsana-s has a significant effect on improvement found in agility and speed in the volleyball player's performance.

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