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Effect of shadow training with suryanamaskar practices on selected skill related physical fitness variables of badminton players

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Abstract

The impartial of this study was to travel the shadow training with Suryanamaskar practices on selected skill related physical fitness variables of badminton players, totally 30 inter collegiate players to participate in this study. Treatment group I underwent shadow training with Suryanamaskar practices, group II acted as control group. All thirty subjects were inducted for pre and posttest on speed and agility. The shadow training with Suryanamaskar practices was given to the experimental group for 5 days per week (Monday to Friday) for the period of eight weeks. The control group was not given any sort of training except their routine work. The speed (50 meter test in seconds) and agility (4 x 10 meter shuttle run in seconds) were assessed before and after training period. The result from 't' test and inferred that 12 weeks shadow training with Suryanamaskar practices treatment produced identical changes over speed and agility of badminton players. Further, the findings confirmed the shadow training with Suryanamaskar practices is suitable protocol to bring out the desirable changes over speed and agility of badminton players.

Keywords: Shadow training with Suryanamaskar practices, speed, breath holding agility and badminton players

Introduction

Badminton is one of the most popular sports in the world that can easily be played in all age groups for competition or recreation (Chin, Wong, So, Siu, Steininger, & Lo, 1995) ^[1]. It is stated that there are great benefits for beginners to teach the techniques of shooting and running together (Sucharitha, Reddy, & Madhavi, 2014) ^[2]. In this way, the athlete can improve the strength of the leg muscles, overall strength, and quickness while stabilizing the running technique (Sucharitha, Reddy, & Madhavi, 2014) ^[2]. In this sport, it is essential for success to complete a move (long step) quickly and return to the starting point or move in another direction. Badminton requires quick thinking during the game and the ability to make necessary moves, underscoring the importance of technique. Being in the right place at the right time is crucial for smooth and effective application of technique and tactics. One of the most important conditions for success in badminton is mastering specific footwork and running techniques.

These values highlight how rallies in badminton involve rapid hits, emphasizing the significance of sport-specific foot movements and training (Chin *et al.*, 1995) ^[1]. While some sources suggest that shadow badminton exercises are essential for footwork (Badminton Association of England, 2002), there is limited literature on specialized foot practice. The primary aim of the study was to investigate the effects of a 12-week shadow badminton training course on motoric features in children aged 8-10 years (Ihsan, Nasrulloh, & Yuniana, 2023) ^[3]. Additionally, the study aimed to compare shadow badminton practice with classic badminton training to determine the frequency and duration of shadow badminton training for beginners in the sport (YÜKSEL & Aydos, 2018) ^[4,5].

Materials and Methods

To attain the determination of the study 30 badminton players at the age group of 21-25 years were selected from various academy in Coimbatore district.

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The selected subject was randomly assigned into two equal groups, consist of fifteen each, namely shadow training with Suryanamaskar practices group (n=15) and Control group (n=15). The respective training was given to the experimental group the 5 days per weeks (Monday to Friday) for the training period of twelve weeks. The control group was not given any sort of training except their routine. The evaluated speed were measured by 50 meters dash test the unit of measurement was in seconds and agility were measured by 4x10 meter shuttle run in seconds. The parameters were measured at baseline and after 12 weeks of shadow training with Suryanamaskar practices were examined. The intensity was increased once in two weeks based on the variation of the exercises. The training programme was lasted for 45 minutes for session in a day, 6 days in a week for a period of 12 weeks duration. These 45 minutes included warm up for 10 minutes, 25 minutes specific skill training with pranayama and warm down for 10 minutes. The equivalent in shadow training with Suryanamaskar practices is the length of the time each action

in total 5 day per weeks. (Monday to Friday).

Statistical analysis

The collected data on speed and agility due to the combination of shadow training with Suryanamaskar practices was statically analyzed with “t” test to find out the significant improvement between pre& posttest if any. In all case the criterion for spastically significance was set at 0.05 level of confidence ($p < 0.05$).

Table 1: Computation of ‘t’ ratio on speed of badminton players on experimental group and control group (Scores in Numbers/ Seconds)

Group	Test	Mean	Std. Deviation	T ratio	
Speed	Experimental Group	Pre test	7.74	0.49	4.56*
		Post test	7.52	0.31	
Control Group	Pre test	7.71	0.21	0.96	
	Post test	7.75	0.41		

*Significant level 0.05 level (degree of freedom 2.14, 1 and 14)

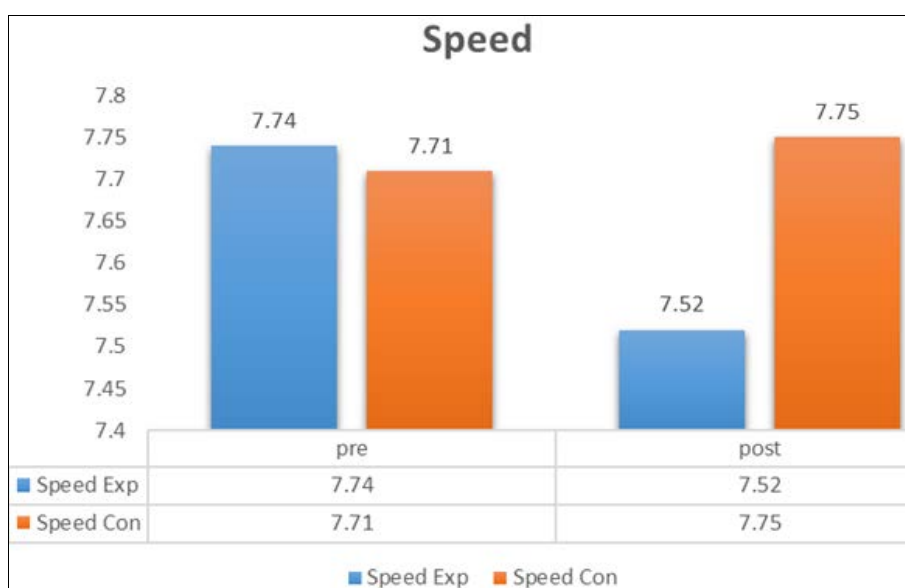


Fig 1: Bar diagram showing the mean value on speed of badminton players on experimental group and control group

Table 2: Computation of ‘t’ ratio on agility of badminton players on experimental group and control group (Scores in Numbers/ Seconds)

Group	Test	Mean	Std. Deviation	T ratio	
Agility	Experimental Group	Pre test	11.32	1.08	14.64*
		Post test	10.43	1.25	
Control Group	Pre test	11.29	0.99	0.82	
	Post test	11.26	0.78		

*significant level 0.05 level (degree of freedom 2.14, 1 and 14)

Table 1 reveals the computation of mean, standard deviation and ‘t’ ratio on agility of experimental and control group. The obtained ‘t’ ratio on agility were 14.64 and 0.82 respectively. The required table value was 2.14 for the degrees of freedom 1 and 14 at the 0.05 level of significance. Since the experimental group ‘t’ values were greater than the table value of 2.14, it was found to be statistically significant. The control group ‘t’ value is less then table value of 2.14 it was found to be statistically insignificant.

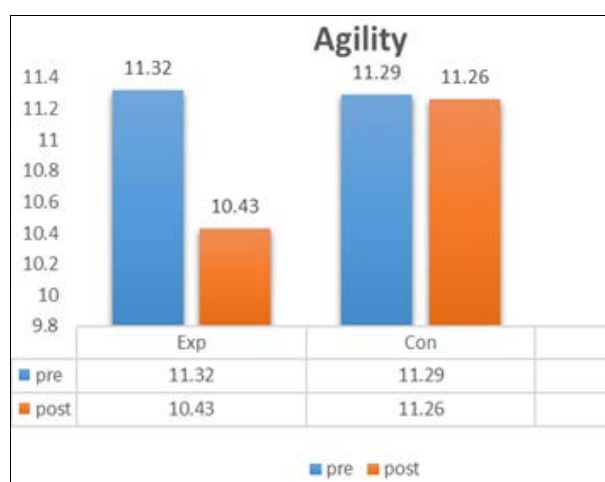


Fig 2: Bar diagram showing the mean value on agility of softball players on experimental group and control group

Discussion on findings

The current study examined the effect of shadow training with Suryanamaskar practices on the selected variables are speed and agility of the badminton players. The results of this study indicated that shadow training with Suryanamaskar practices is more efficient to bring out needed changes over the speed and agility of the badminton players.

The speed performances of the subjects participating in the study were determined by the 50 m speed run test. In a study conducted on young male badminton players. It was reported that the mean value of 50 m sprint average was 4.76 sec in the study performed on 1777 female children between 8-10 years of age and 4.47 sec in another study done on male children in the same age range. It can be said that these results are similar to the mean values of 20 m speed in the study. According to pre-test results, when the CG subjects got better scores than the subjects who made up the SB group, but the intermediate test and the post-test were examined, it was seen that the subjects who formed the group of the resultant training program got better scores than the CG at 50 m speed. This can be a sign that shadow badminton training has a positive effect on acceleration.

The 4 x 10 meter shuttle running test was applied to the subjects participating in the study and the maximum oxygen consumption capacity was determined by the values obtained from 4 x 10 meter shuttle running test. When the results related to maximum oxygen capacity were examined, mean values of male subjects were statistically higher than female subjects in terms of gender factor. In a study of 11-year-old girls and boys who did not exercise, the mean values of Max VO₂ were 27.76 ml / kg / min and 32.11 ml / kg / min, respectively (Saygın, Karacabey, and Saygın, 2011) ^[10]. In another study conducted at 7-11 years of age, aerobic capacities of 766 male students were reported as 46, 4 ml / kg/min (Esmailzadeh, Kalantari, and Nakhostin-Roohi, 2013) ^[11].

The result from this study are very hopeful and it proves the benefits of shadow training with Suryanamaskar practices. The badminton players are not only using dance exercises to improve their flexibility but also to improve the presentation. Also, the results support that development in mobility can occur 12 weeks of shadow training with Suryanamaskar practices.

Conclusions

Based on the result of the study it was concluded that the shadow training with Suryanamaskar practices have been significantly changes in speed of badminton players. It was concluded that the shadow training with Suryanamaskar practices have been significantly changes in agility of badminton players.

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