

Effect of Shadow Training on the Beginners and Advance Players in Achieving High Performance in Badminton

^aAyush Rawat, ^bJoginder Singh

^aResearch Scholar, Pacific Academy of Higher Education & Research University, Udaipur, India

^bResearch Guide Pacific College of Physical Education, Pacific Hills, Airport Road, Debari, Udaipur, Rajasthan, India

Abstract

The purpose of this study is to examine the effect of Shadow training (ST) on the selected physical variables on the advance level and beginner badminton players in an academy. This is an experimental research with a pre and post-test design which includes Shadow training on selected experimental & control group. 20 male badminton players are selected for this study where 10 beginner players selected were in the control group & remaining 10 players in the experimental group. The participant's age category is between 15 to 19 years. The duration of the Shadow training program is 30-35 minutes for 4 times a week. All the subjects are tested before and after the 12 week program. The data is collected from each subject before and immediately after the training period. The collected data is statistically analysed by using dependent's test and analysis of covariance (ANCOVA). According to the results, the effect of Shadow Training on the selected physical variables i.e. Lower back strength & Upper back strength (using Kraus-Weber test) was significant. This is evident that Shadow training is beneficial for the improvement of physical variables. The higher number of training sessions in a week will be more effective in improving overall fitness level among the students.

KEYWORDS: Shadow training, lower back strength, Upper back strength, Kraus-Weber test.

INTRODUCTION:-

Shadow footwork is where the player goes to a court, and practices the footwork aspect of playing badminton for the six corners of the court (front-left, front-right, side-left, side-right, back-left and back-right).

Shadow badminton is one of the most effective badminton exercises that most players seems to have overlooked. It is very beneficial in a lot aspects in the game if it's done properly. It'll improve your **court endurance, speed, timing, physical condition and anticipation.**

One athlete can run for hours nonstop, but when he or she enters the badminton court he/she can run out of gas in a matter of minutes. This is mostly because of one did not **exercise or practice the muscle used in badminton.**

As the player, you should:

- Pay attention to how you are moving in shadow badminton. How many steps/shuffles are you taking from one location to another? It varies from person to person, but generally you want an optimization of the (least) number of steps you take and the (fastest) speed and recovery you can get from shot location to base position.
- Keep the head up, just like you would while watching the birdie.
- Attempt to fix up mistakes you have in footwork (and maybe technique) if you can.
- Train for either stamina, or reaction speed from footwork (stamina: go for all six corners, then go for all six corners again. Repeat. Reaction: get a friend to point you to which corner to go to, and repeat the process for as long as you can.)
- Fix footwork weaknesses (such as not being able to recover quickly enough from back court to front court) by drilling the process over and over again, while always being on the lookout for ways to optimize footwork.
- Keep a consistent training schedule; your game will improve appreciably if you keep things up.

MATERIALS AND METHODS:

This is an experimental research with a pre and post-test including a RT and a control group.

Selection of Variables and Test:

No	Variables	Test	Units of Measurement
1	Upper Back Strength	Kraus-Weber Test	Count in seconds
2	Lower Back Strength	Kraus-Weber Test	Count in seconds

Research Methodology:

The sample of size 10 (Badminton Players) is selected randomly to measures the effectiveness of shadow treatment between the Observational group (control group) and Experimental group. For that we have chosen total 20 players who are divided into two groups, out of which 10 players were grouped in observational group which has not been given any kind of shadow training while another 10 players were grouped into experimental group whom have given shadow training (special training to improve the Badminton Game). After then, two variables are selected to know the effectiveness of shadow training named lower back strength (in seconds) and Upper back strength (in seconds) using Kraus-Weber Test.

For the analysis purpose, SPSS 25.0 is used to analyse the data collected from the respondents. One most popular statistical technique is used named one way analysis of variance to know the effectiveness of shadow treatment, using two variables,

among the badminton players before and after giving shadow treatment and found the following results:

Study 1 [Using Lower Back Strength (in seconds)]:

H0: Lower Back Strength is not effective technique.

V/s

H1: Lower Back Strength is not effective technique.

One way analysis of Covariance is performed and found the results as follows:

Table 1: Sample Size in Control and Experimental Group

		Name	N
GROUPS	1	CONTROL	10
	2	EXPERIMEN TAL	10

Table 2: Descriptive statistics

GROUPS	Mean	Std. Deviation	N
CONTROL	59.40	10.606	10
EXPERIMEN TAL	90.60	21.062	10
Total	75.00	22.794	20

[Dependent variable: Post-test Lower Back Strength (in seconds)]

Table 3: Test of the lower back strength effect between control group and Experimental group

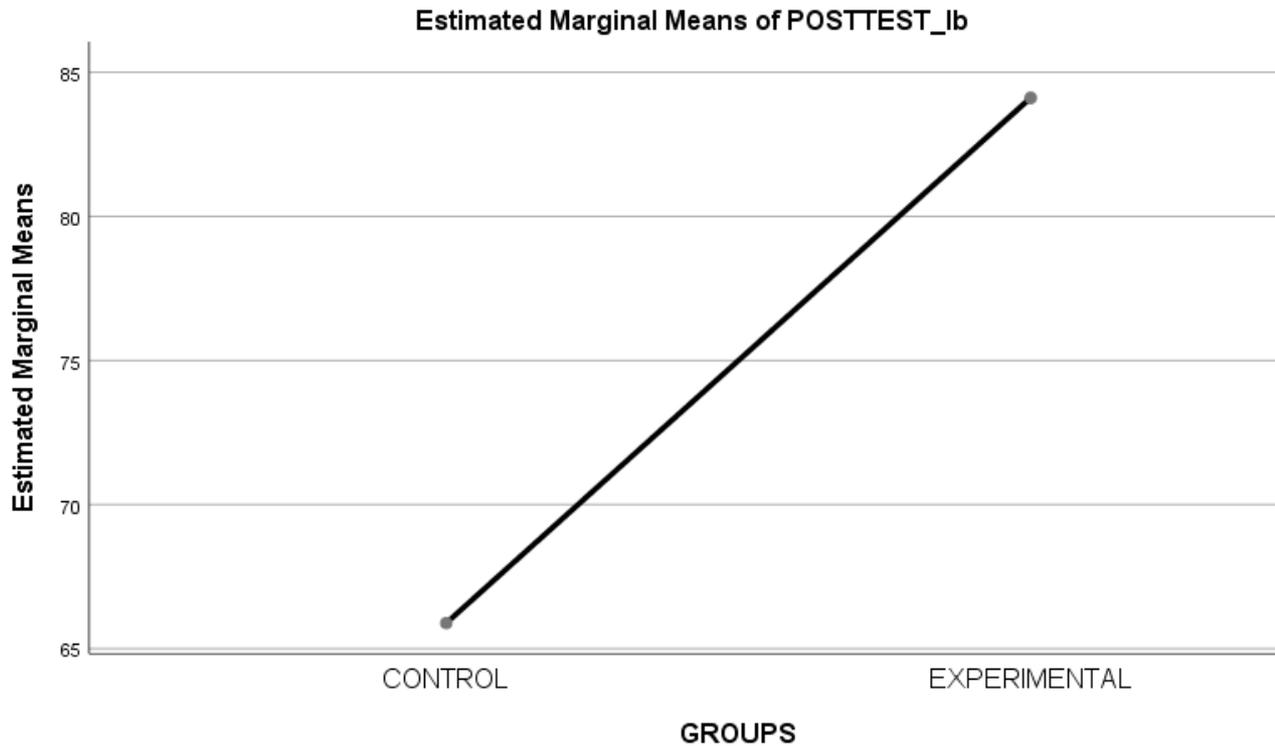
Source	Type III Sum of Squares	Degree of Freedom	Mean Square	F	P value
Pre-test LBS	4512.266	1	4512.266	155.743	.000
Treatment	1399.888	1	1399.888	48.318	.000
Error	492.534	17	28.973		

[The value of Coefficient of determination (R2) is 0.950]

Table 4: Estimated Marginal Means of Control group and Experimental group

GROUPS	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
CONTROL	65.887 ^a	1.780	62.132	69.642
EXPERIMENTA L	84.113 ^a	1.780	80.358	87.868

Table 5: Line chart showing the co-variation between Control group and Experimental group



Covariates appearing in the model are evaluated at the following values: PRETEST_lb = 63.60

Discussion:

Table 1 shows the sample size of the study which is 10 per group. Table 2 shows the averages of LBS in Control group (59.4) and Experimental (90.6) respectively which indicates the large variation between two groups. Now to check whether given differences between two averages in significant or not, we have performed ANCOVA test, which indicates the significant difference between the two groups with respect to LBS as its significant value is 0.000 which is less than 0.05, also this differences can be seen from the line chart.

Study 2 [Using Upper Back Strength (in seconds)]:

H0: Upper Back Strength is not effective technique.

V/s

H1: Upper Back Strength is not effective technique.

One way analysis of Covariance is performed and found the results as follows:

Table 1: Sample Size in Control and Experimental Group

		Name	N
GROUPS	1	CONTROL	10
	2	EXPERIMENTAL	10

Table 2: Descriptive statistics

GROUPS	Mean	Std. Deviation	N
CONTROL	52.20	8.574	10

EXPERIMENTAL	76.10	13.461	10
Total	64.15	16.461	20

[Dependent variable: Post-test Upper Back Strength (in seconds)]

Table 3: Test of the Upper back strength effect between control group and Experimental group

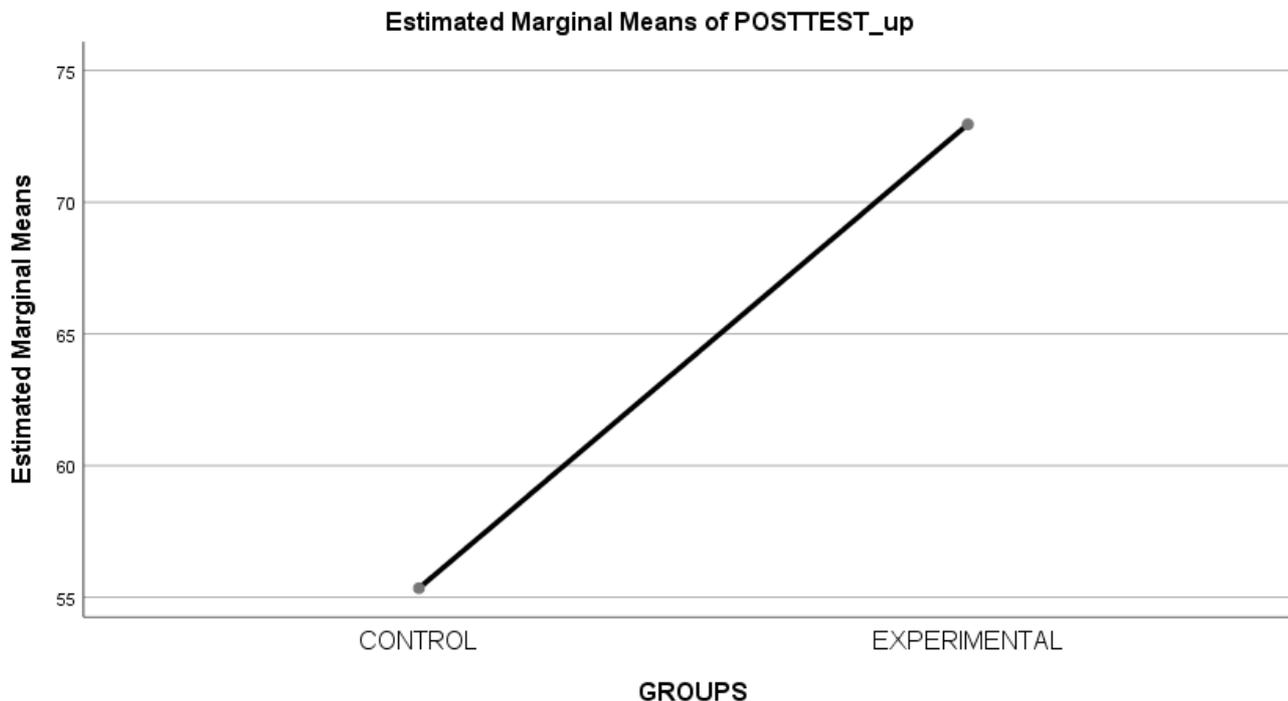
Source	Type III Sum of Squares	Degree of Freedom	Mean Square	F	P value
Pre-test LBS	2033.351	1	2033.351	133.387	.000
Treatment	1412.901	1	1412.901	92.686	.000
Error	259.149	17	15.244		

[The value of Coefficient of determination (R2) is 0.950]

Table 4: Estimated Marginal Means of Control group and Experimental group

GROUPS	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
CONTROL	55.345 ^a	1.264	52.678	58.013
EXPERIMENTAL	72.955 ^a	1.264	70.287	75.622

Table 5: Line chart showing the co-variation between Control group and Experimental group



Covariates appearing in the model are evaluated at the following values: PRETEST_ub = 54.65

Discussion:

Table 1 shows the sample size of the study which is 10 per group. Table 2 shows the averages of UBS in Control group (52.2) and Experimental (76.1) respectively which

indicates the large variation between two groups. Now to check whether given differences between two averages in significant or not, we have performed ANCOVA test, which indicates the significant difference between the two groups with respect to LBS as its significant value is 0.000 which is less than 0.05, also this differences can be seen from the line chart.

Conclusion:

From the study it is indicated that lower Back Strength and Upper Back Strength have significant effect on Badminton Players. Hence we can use the above techniques to improve the badminton game.

REFERENCES:

- Yüksel, M., & Aydos, L. (2018). The Effect of Shadow Badminton Trainings on Some the Motoric Features of Badminton Players. *Journal of Athletic Performance and Nutrition*, 4(2).
- Effect of Selected Footwork Drills on Motor Fitness Variables of Badminton Players
 - J. Nirendan 1 and Dr.K. Murugavel 2
 - **Sunil Kumar 2013** Badminton skill and rules, khel sahitya Kendra, p: 1, 2.
- 2. **K Azmi and N W Kusnanik 2018** Effect of Exercise Program Speed, Agility, and quickness (SAQ) in Improving Speed, Agility, and Acceleration Journal of Physics conference Series 17890.
- **Luiz de França Bahia Loureiro Jr, Mário Oliveira Costa Dias Felipe Couto Cremasco, Maicon Guimarães da Silva , Paulo Barbosa de Freitas 2017** Assessment of Specificity of the Badcamp Agility Test for Badminton Players Journal of Human Kinetics volume 57/2017, 191- 198 DOI 10.1515/hukin-2017-0060.
- **Mehmet Fatih Yüksel**
Necmettin Erbakan University, Ahmet Keleşoğlu Faculty of Education, Department of Physical Education and Sport
 - **Latif Aydos** Gazi University, Faculty of Sport Sciences, Department of Physical Education and Sport
 - Grice, T. (2008). *Badminton Steps to Success (2nd Ed)*. Champaign, I L: Human Kinetics, 2008.
 - Kuntze, G., Mansfield, N. & Sellers, W., *A biomechanical analysis of common lunge tasks in badminton*. *Journal of Sports Sciences*, 28(2), 2010, pp. 183-191. *Advances in Social Science, Education and Humanities Research*, volume 278
 - **Norma Jone Carr(1980)**, “The Effects of Isometric Contraction and Progressive Body Conditioning Exercises on Selected Aspect of Physical Fitness and Badminton Achievement of College Women”