"EFFECTS OF SELECTED YOGASANA PRANAYAMA & MEDITATION ON SHOOTING PERFORMANCE OF STATE LEVEL PISTOL SHOOTING PLAYERS".

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ABSTRACT

Shooting is a sport that requires a high degree of concentration, experts believe that yoga might help shooters improve their mental and physical abilities. The present study was undertaken on 120 subjects to evaluate the effect of selected yogasanas pranayama and meditation on shooting performance of state level pistol shooters, aged between 14 to 19 years, from Gurukul, Kaithal of Haryana State, who were willing to participate in the program were recruited. The study shows that the shooting score of players improved significantly by training based on combination of Yogasana Pranayam and Meditation.

INTRODUCTION

Yoga has been said to strengthen the mind-body connection, bring calmness and relaxation to mind, enhance self confidence, strengthen self-discipline and self-resolve, reduce stress/anxiety and increase vitality and energy throughout the body. Evidently, it would appear that yoga has extensive benefits and can help us to be a more balanced, relaxed, focused, efficient and effective person. In order to succeed in shooting, one must be very focused and maintain excellent bodily balance when aiming. Since shooting is recognized as one of the activities that may be taken up by any person or participant paying little heed to age and sex for diversion and professional contribution. The shooting sports include

those aggressive activities featuring tests of capability (accuracy and speed)employing diverse types of weapons, for example, guns and compressed air weaponry.

METHOD

This study will evaluate the effect of selected Yogasana Pranayama and Meditation on shooting performance of state level pistol shooters. The training based on combination of Yogasana Pranayama and Meditation in this study intends:-

(i)   To improve the shooting performance.

(ii)   To increase in shooting scores.

The present study was undertaken on 120 subjects to evaluate the effects of Yogasanas, Pranayama and Meditation on shooting performance of state level pistol shooting players, aged between 14 to 19 years, from Gurukul, Kaithal of Haryana State, who were willing to participate in the program were recruited.All subjects underwent sessions of Yogasanas ,Pranayama and Meditation training from 4.45pm to 7.00 pm which were suitable for them. The subjects were instructed to practice once a day and at the end of the training the parameters were measured & recorded.

DATA COLLECTION

Focusing nature and objectives of present study researcher approached Gurukul, Kaithal of Haryana State and after securing permission prepared basic data for matching and group formation. Thus, two groups of 60 no. of subjects were formed. As per the details provided above, specific conditioning exercises were administrated to experimental group. The data collection was done on two stages, First pre-test, and second post-test data of both groups i.e the experimental group E YOG & control group

i.e. Group C CONTROL. And before start training pre-test data was recorded and final data was taken after completion of training programmed.

STATISTICAL TECHNIQUES

The data would have been no utility unless it is analyzed and interpreted by statistical techniques. Analysis of data meant, studying the tabulated material in order to determine inherent facts and meaning to fulfill the need of research problem. This practice included breaking up off complex factors into simpler parts and putting them in new arrangements for the purpose of the investigation. Statistical techniques like Mean score, Standard Deviation, t-ratio, paired t-test have been used. Thus, pre-test and post-test data was treated for proper analysis and interpretation.

In this case t-test was best suited, and two samples were related. Hence, researcher applied paired t- test to check pre-tests data and post-test data analysis in Experimental Group E YOG and Control Group C Control.

ADMINISTRATION OF THE TESTS:

Procedure for collecting data: The team consisting of researcher along with four to five co-workers (physical education teachers, coaches) contacted the "Acharya" of Gurukul, Kaithal of Haryana State, and the purpose of the study was explained by the investigator. The researcher requested to Acharya to establish training center for Yogasana and requested to provide the subjects and taken assurance that all the subjects should be present in the training sessions and must appear for pre-tests and post tests. Firstly, the personal data regarding name, age of the participant, class were collected with the help of a performa prepared by the investigator.

Then, the investigator and her panel of co-workers conducted a shooting match of 40 shots for pre-test data, and then started the training programme. After training for measuring improvements in shooting scores, a shooting match of 40 shots was conducted for post post-test data.

Data Analysis and Results of the study

A. **Pre-Test Findings**

Both the study groups were compared at the time of recruitment for the selected parameter. The results of the pre-test were as follows:
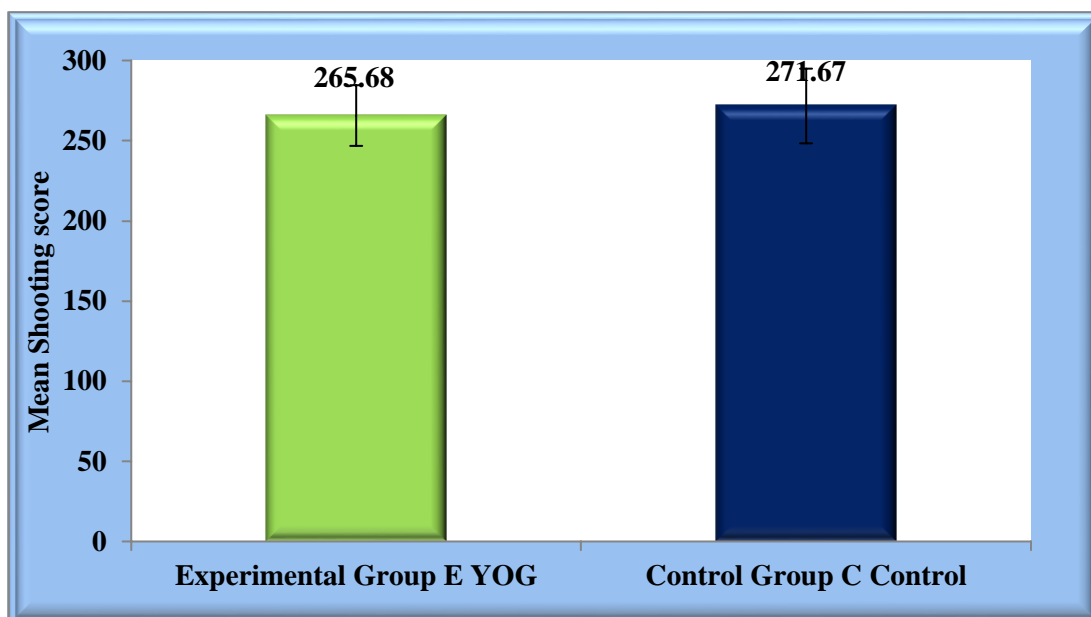

Figure 1 : Mean Shooting score of players in Pre-test

Pre-test average shooting proficiency score of players is shown in Figure 1. It can be

observed that Experimental Group E YOG(265.68) players were to some extent less proficient compared to Group C Control(271.67).

Table 1 : Shooting score of players in pre-test

Group	N	Mean	Std. Deviation	Mean difference	t	p-value
Experimental Group E YOG	60	265.68	18.94	-5.983	-1.544	0.125^{NS}
Group C Control	60	271.67	23.28			

NS - Non Significant(p > 0.05)

Mean shooting score of players in both groups shown in Table 1 were found to be statistically non-significant(t 1.544, p 0.125; p>0.05) with mean difference(5.983).

B.   **Post-Test Findings**

The Experimental Group E YOG shooting players were given training based on combination of Yogasana Pranayama and Meditation. To see the after training effect both groups were again compared as post-test for the selected parameter.
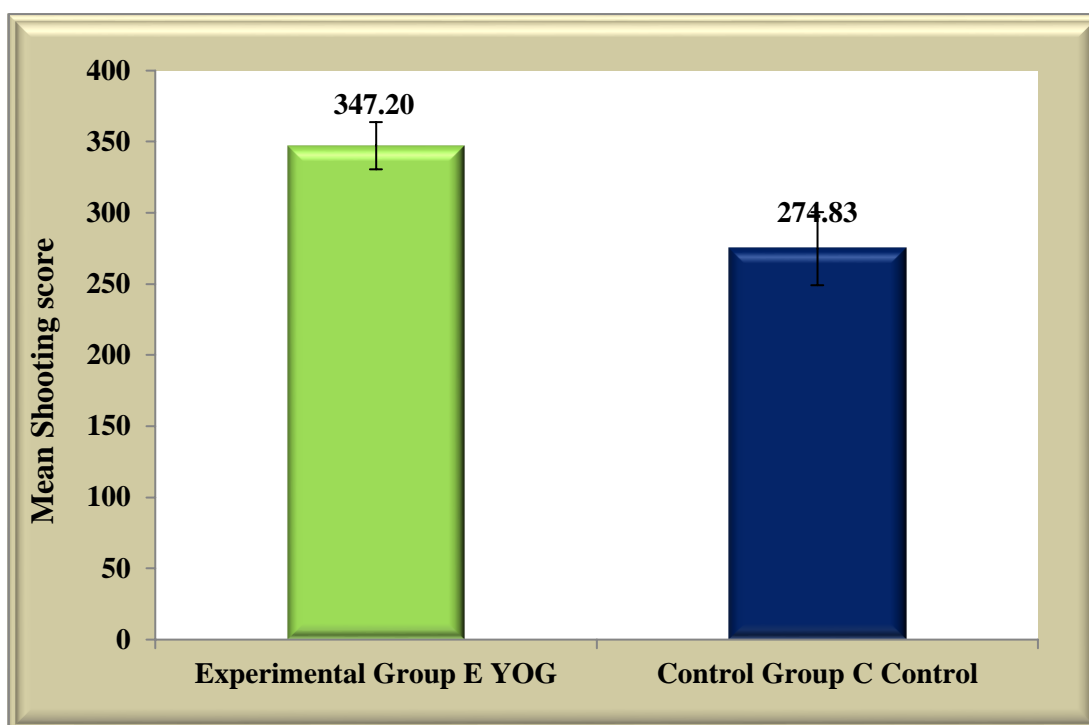
Figure 2 : Mean Shooting score of players in Post-test

The illustrated Figure 2 gives information about mean shooting score of both groups in post-test. Shooting performance of Experimental Group E YOG (347.20) improved by training compared to Group C Control (274.83).

Table 2 : Shooting score of players in post-test

Group	N	Mean	Std. Deviation	Mean difference	t	p-value
Experimental Group E YOG	60	347.20	16.61	72.367	18.327	0.000^S
Group C Control	60	274.83	25.67			

S - Significant(p < 0.001)

It can be observed from the above Table 2 that mean shooting performance of players improved significantly(t 18.327, p 0.000 ; p<0.001) while assessing during post-test. The Experimental Group E YOG showed higher mean difference(72.367) with Group C Control.

C. Impact of training

In this section the researcher had attempted to assess the impact of training and compare Experimental Group E YOG and Control Group C Control.
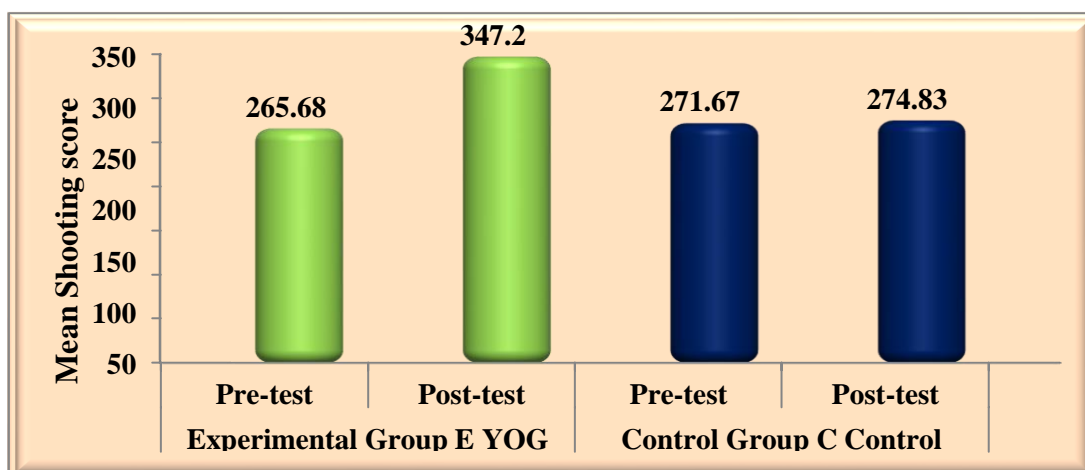

Figure 3 : Mean change in Shooting score of players

The above Figure 3, demonstrate the impact of training on shooting performance. The Experimental Group E YOG improved its average score from 265.68 to 347.2 whereas Group C Control could only lift it up from 271.67 to 274.83

Table 3 : Mean Shooting score among players from both groups

Group	Test	Mean	Std. Deviation	Mean difference	t	p-value
Experimental Group E YOG	Pre- test	265.68	18.94	-81.517	1.297	0.000^S
	Post-test	347.20	16.61			
Group C Control	Pre- test	271.67	23.28	-3.167	-2.372	0.077^{NS}
	Post-test	274.83	25.67			

S- Significant(p<0.001)   **NS-Non Significant(p>0.05)**

The Table 3, shows the pre-test and post-test shooting performance of Experimental Group E YOG and Group C Control.

The study results defines the role of training on the overall shooting performance of players.

The shooting performance of Experimental Group E YOG improved significantly(p 0.000 ; p<0.001). But the Group C Control on routine practice only managed to improve a little and non-significant (p 0.077 ; p>0.05).

DISCUSSION

(A) **Pre -Test Resuls**

1.   The results in Table I, showed that there is no significant difference (p>0.05) in Shooting Score between Experimental Group E YOG and Control Group C Control.

(B) **Post -Test Results:**

2.   The result in Table II, showed that there is significant difference (p<0.001)in Shooting Score as compared between Experimental Group E YOG and Control Group C Control

(C) **Impact of Training:**

In this section the researcher had attempted to assess the impact of training and compare Experimental Group E YOG and Control Group C Control after duration of 3 months.

The Table III, shows the pre-test and post-test shooting performance of Experimental Group E YOG and Control Group C Control. The study results defines the role of training on the overall shooting performance of players. The shooting

performance of Experimental Group E YOG improved   significantly   (p<0.001). But the Control Group C Control on routine practice only managed to improve a little and non-significant (p>0.05).

REFERENCES

1. Mononen K., Konttinen N., Viitasalo J., Era P. (2007). Relationships between postural balance, rifle stability and shooting accuracy among novice rifle shooters. Scand J Med Sci Sports, 17: pp. 180-5.

2. Zatsiorsky V.M. and Aktov A.V. (1990). Biomechanics of highly precise movements: the aiming process in air rifle shooting. J Biomech, 23(1): pp. 35-41.

3. Goodman, F.R., et al., A brief mindfulness and yoga intervention with an entire NCAA division I athletic team: an initial investigation. Pychology of Consciousness: Theory, Research and Practice, 2014. 1(4): p. 339-356.

4. Raju, P.S., et al., Comparison of effects of yoga & physical exercise in athletes. Indian J Med Res, 1994. 100: p. 81-6.

5. Hartfiel, M., et al., The effectiveness of yoga for improvement of well-being and resilience to stress in the workplace. Scand J Work Environ Health, 2011.

6. Harinath K, Malhotra AS, Pal K, Prasad R, Kumar R, Kain TC, et al. Effects of Hatha yoga and Omkar meditation on cardiorespiratory performance, psychologic profile, and melatonin secretion. J Alt Compl Med. 2004 ; 10:261-8

7. Ledesma D, Kumano H. Mindfulness-based stress reduction and cancer: A meta-analysis. Psychooncology. 2009;18:571-9