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EFFECT OF MENTAL PRACTICE COMBINED WITH PHYSICAL PRACTICE ON FOREHAND HIGH SERVE PERFORMANCE

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Abstract:—The purpose of the study was to find out on learning of forehand high serve in Badminton. Seventy male BPE students of LNIPE, Gwalior as the participants undergone the study were divided into two groups, 35 in each group. Both the groups participated in the training programme for a period of eight weeks. Group A was assigned mental practice with physical skill; group B was assigned only physical skill practice. The training was carried out for each group. Quantitative measurement for each of the subject was taken at the beginning and the end of an experimental period of eight weeks by using of Bobrich Badminton Observational Rating Scale through qualified individuals. Significance of mean difference between the pre-test, post - test and adjusted post test scores in each of the criterion variables among the groups were analyzed by the Analysis of Covariance at the 0.05 level of significance. The finding of the study has shown that there is a significant effect skill practice on learning of forehand high service in badminton than only physical skill practice.

Keywords: mental practice, physical skill practice, forehand high serve performance

INTRODUCTION :

Sports psychologists and coaches incorporate modus operandi to enhance performance with so many nomenclature of these techniques like mental exercise, self-regulation, imaginary training, focus, stress management, thought management, goal setting, mental training, relaxation training, mental rehearsal, conceptualization symbolic rehearsal, etc. Even many psychologists agreed that the terms mental practice, imagery, imagery training, and imagery rehearsal will be synonymous terms (Suinn, 1997; Khaled, 2004). Because their operational and methodical procedures and elements may be match each other to some extent with one aim to enhance performance. Although mental exercises have been developed as an effective method in developing and improving motor learning for a few decades, every day new findings in this regard are presented and different approaches of mental practice are studied (Yadolazadeh, Salehian, Karbalaie, Behaeen, Piruzfar, & Khodaparast, 2011).

These techniques are equally important in all fields. As Arora, Aggarwal, Moran, Sirimanna, Croche, Darzi, Kneebon, Sevdalis, (2011) reported that mental practice (MP) is a strategy used in other high-performance industries to alleviate anxiety in surgeons. Mental training techniques have been largely used by psychologists, coaches and athletes as a tool for improving learning and performance in sports (Hall & Fishburne, 2010). Nicklaus, (1974), certainly one of the world's best golfers wrote that he "never hit a shot, not even in practice, without having a very sharp, in-focus picture of it in my head ... like a color movie".

During the past years, numerous studies have explored the effects of, and similarly labeled exercises on the acquisition of skill. Mental practices (MP) the classical form of psychological training in the learning of a movement at the work place and in sports. Mental practice (MP) is prior

to performance. Results indicated that mental practice (MP) has a positive and significant effect on performance, and was moderated by the type of task, the retention interval between practice and performance, and the length or (Driskell, Copper, & Moran, 1994). Its use is not restricted for motor learning alone but is also practiced in competition preparation (Munzert & Hackfort, 1999).

Based on the description, this study was intended to identify role of mental practice to the for high service. A meta-analysis of the prose on mental practice was conducted and to identify conditions under which mental practice is most effective. Same side it is also in practice that combining mental and physical practice is more efficient or at least equal to a physical practice in improving motor skills (Denis, Chevalier, & Eloi, 1985).

Yaguez, Nagel, Hoffman, Canavan, Wist, & Homberg (1998) emphasized that MP is effective as physically exercise in learning motor skills, but others have (Jackson, Doyon, Richards, & Malouin, 2004) underlined the role of mental practice less important than physically exercise on motor learning although same side Brouziyne & Molinaro, (2005) have shown that group combining physical practice and mental imagery when compared with the group just physically practicing the approach shot. Yadolazadeh et al. (2011) might be said, we can use the mental exercise as a mean for instruction of sport skills.

Abdi, Mahmoodifar, Zandi, & Abdi, (2012) stated that moreover, the use of mental rehearsal coupled with physical practice has been shown to accelerate motor skill acquisition in many different contexts and is better than no practice at all. Others have found that some mental rehearsal strategies are better than others for maximizing performance in badminton short serve learning.

Most of the studies are conducted in laboratories and the results are sometimes insufficient and difficult to implement in sport situations. This experiment was a field study on fundamental badminton skill with different complexity and increases the ecological validity of the study (Tzetzis & Votsis, 2006). Several studies have been done on in order to accelerate the rate of learning motor skills and athletic performance in different games like set shot in Basketball (Yadolazadeh et al., 2011), short service in Badminton (Abdi et al., 2012) approach shot in Golf (Brouziyne & Molinaro, 2005) but the application and its effect on forehand high serve in Indian players in field situation were unstated as the review of studies. So, investigators of this study undergo to that, is combine effect of mental and physical skill practice (MPPSP) on Badminton high serve learning or not then only physical skill practice (PSP) group? Here we set the purpose of the study was to find out skill practice (MPPSP) on the learning of forehand high serve in Badminton.

HYPOTHESIS

It was hypothesized that there would be significant skill practice on forehand high serve learning.

METHODOLOGY

Selection of Participants and Groups

Seventy male bachelor of physical education students were selected randomly for the exploration from Lakshmi Bai National Institute of Physical Education, Gwalior. Age of participants was ranging from 18 to 25 years and all their having a background of at least three years of continues athletic activity from ten sport fields expect Badminton. The subjects were randomly divided into two groups. Group A was given mental practice with physical skill practice (MPPSP) where as group 'B' was given only physical skill practice (PSP).

The experimental group (Group - A) was given mental practice (MP) combining with skill practice for the duration of 15 minutes in each session just prior to the skill practice of 35 minutes of duration. On the other hand (Group - B) was given only physical skill practice (PSP) for the duration of 35 minutes.

Administration of Training Programme

The forehand high service was used to assess All the subjects were trained how to perform mental practice before starting the training session. The investigator assembled all the subjects and explained about the technique of mental practice (MP).

After one week of learning, actual mental practice of the skill began. Group 'A' was given mental practice with physical skill practice (MPPSP). In mental practice (MP) method the researcher wrote the complete skill in various parts, such as stance, how the server will take position for the service, dropping the shuttle followed by the execution, follow through and finally they are asked to concentrate on the target which gives them maximum scores.

Investigator gave a copy of this to all the subjects who were in group 'A' then they were asked to read the instructions and then in lying position with closed eyes they were asked to practice the same without performing any

physical movement. Group 'B' was asked to do only physical skill practice (PSP) for thirty-five minutes.

Administration of the Test

After eight weeks both the groups were tested on serving ability. Forehand high service was used as a skill to be tested. The investigator has selected the forehand high service as the skill because none of the subject had any idea of performing the skill. For the evaluation of the subjects a serving test was employed and the final performance of both the groups was compared.

Bobrich Badminton observational rating scale (Bobrich, 1989) was employed to measure, the development in the ability of forehand high serves, which includes several additional skills. To measure forehand high serve ability, subjects served ten times in a legal manner into a target area on the court across the net, let serves was repeated. The final score of each selected subject of is the sum of points scored in ten trails.

Statistical Procedure

To find out forehand high serving ability the ANCOVA was employed and .05 levels.

Result

To compare the scores of mental practice on forehand high serving ability the ANCOVA different groups is presented in table 1 followed by fig1:

Table -1 Analysis of Covariance of the Means of Experimental (Group-A) and Control Group (Group-B)

Test	Groups		Df		Sum of squares	Means Sum of Squares	F ratio
	G-A	G-B					
Pretest	12.37	12.80	A	1	3.64	3.65	0.10
			W	35	1183.49	35.86	
Post Test	17.94	14.4	A	1	212.69	212.63	1.69
			B	33	4155.57	125.93	
Adjusted Post Test Means	18.37	14.18	A	1	3472.61	1736.30	47.64*
			B	32	1166.35	36.45	

* Significant $F_{0.05}(1, 33) = 3.88$; $F(1, 32) = 3.98$; A = among the mean W = within the mean

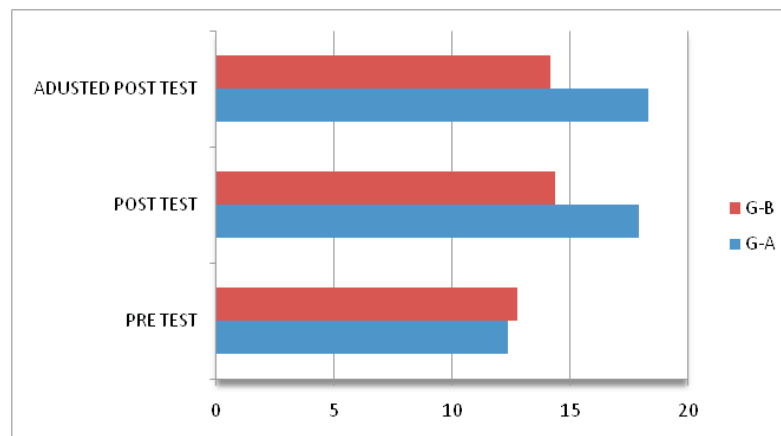


Fig 1 Comparative chart of Means of Both Groups

The table 1 and fig 1 showed that Group A was higher scorer in Post Test and in adjusted Post Test Means. There was significant difference found in MPPSP than PSP group.

DISCUSSION OF FINDINGS

It is observed from the findings that there is significant difference between the mental practice plus physical practice (MPPSP) group (A) and physical skill practice (PSP) group-B. The results of Bobrich Badminton observational rating scale test shown that the mean high serve score of the MPSP group was significantly higher than of the PSP group. Several studies (Yadolazadeh et al., 2011, Brouziyne & Molinaro, 2005; Hegazy, 2012) have confirmed these types of findings for skill acquisition in different disciplines like Basketball, Golf, and Tennis respectively. Even same type of conclusions as in Badminton skills were reported by Hidayat et al., 2011; Abdi et al., 2012.

This reason could be attributed to the fact that mental practice appears to be most effective in improving the performance of athletic skills having a large cognitive component, possibly because the athlete can sequence and rehearse the order of movements in his or her mind. If it is used for relatively simple skills such as forehand high service it is most appropriate while greater concentration must be paid to the specific details of the movement along with a greater investment of time. Ryan, Blakeslee, and Furst (1986) agreed that imaging oneself performing a motor task is similar to observing a model performing the task. This mental representation provides the interval model for response production and the standard for response correction, moreover in seeing the model receive reinforcement for proper performance, are is vigorously reinforced and subsequently improves.

Second, empirical findings also suggest that highly skilled athletes better utilize mental practice than it is by novice performers. Apparently, some experience with the athletic task is necessary for the positive effects of mental practice techniques to be maximized in beginners also. Hidayat (2011) recommended that the responsibility of the coach, related to both psychological skills method above, is to attempt both implementations into integral part of the whole developing process, especially in acquisition learning process of badminton motor skill. It is because the effective and efficient acquisition is one of the standard determinants of an athlete's sport achievement.

Another reason could be found that a group who employed mental practice followed by physical practice, retained better, after eight week had passed, than other groups who had only physical practice. The theory of quantum intelligence (where thought turns into action) is the foundation of the mind/body concept for performing complex athletic movements (O'Shea, 2002).

The findings of the present study also reveal that skill practice group also significantly improved on forehand high service. This may be attributed to the fact that all the subjects were not have quit knowledge of this skill so they are very keen to learn a new skill and their interest in the skill brought improvements.

Finally, it seems evident mental practice cannot completely replace physical practice in the practice of an athlete but that a combination of these two procedures can be feed to the athlete's individual abilities and needs to maximize the potential benefits. Guigan (1978) framed another strong reason that mental practice activates many of the neural components in the brain that are responsible for actually directing movements. The component that is not, of course, fully activated in mental practice is the motor component. Nevertheless, although all of the motor units that are activated when a movement is actually executed are not mobilized during mental practice, there is convincing evidence that some of the motor units that are normally activated during movement execution are activated when a person mentally practices the movement. findings the hypothesis was rejected.

CONCLUSIONS

Within the limitations of the present study the following conclusions may be derived:

- ❖ The training programme of mental practice significantly improves learning of forehand high service in novice.
- ❖ The inter-group comparison between both the two groups showed is superior to the physical practice alone.
- ❖ The control group which did only physical practice learned the skill but it was less effective way of learning.

RECOMMENDATION

On positive and highly significant results we may be suggested that same type of study may be done with high and advance performance groups and for other skills development as well as for both genders also.

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