



EFFECT OF PSYCHOLOGICAL EXERCISE ON FRONT-FOOT STRAIGHT DRIVE IN CRICKET

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ABSTRACT

The purpose of the investigation was to study the effect of psychological exercise on front foot straight drive in cricket. Subjects were randomly selected from Lakshmibai national Institute of physical education, Gwalior, M.P. The study delimited to 45 male cricket players of the group 18 to 25 years. The subjects were divided into three groups each with 15 subjects – experimental(mental training), experimental(physical training), experimental(without training). The data were collected twice for each group – one before the eight week training program and the other after the training program. The test was selected from the "Learn Cricket with Frank Tyson". There was significant difference in pre and post test of mental training and there was significant difference among three groups by applying ANOVA test.

KEYWORDS : Psychological Exercise, Cricket, Front foot Straight drive,

INTRODUCTION

For many years physical educators taught of their instructions as pertaining to learning through physical means. Worthy of attention is the current interest in mental practice, which is a form of passive learning in the sense that overt practice does not take place. Mental or image practice of conceptualization refers to task rehearsal in which there are no observable movements. Researchers have compared the effectiveness of learning task through actual physical practice with mental practice or a combination of physical-mental practice. Typically, physical practice is better than mental practice which in turn is better no practice at all.¹

The term mental training is used to signify the introspective or covert rehearsal that takes place within the individual other terms which has occasionally been used in reference to this process are conceptualization, ideational functioning introspection and imagery practice.²

These are several reasons why teachers of physical education should give serious attention to the systematic use of mental practice in addition to traditional overt performance. Perhaps the most important reason is that the learner may develop proficiency in the skill more quickly, more thoroughly and possibly with greater retention. Another important reason why attention should be devoted to mental practice is that more efficient use might be made of the crowded facilities and limited equipments which prevail in many schools today.³

Mental practice is used by many superior athletes to pratise physical skills such as jumps, shots, lift, tricks, plays, routines strategies and so on, virtually and physical skill or combination of physical skills can be practiced in imagery once an athlete becomes adopt at using imagery. However, the effective use of imagery require practice, just as learning to perfect physical skills requires practice. It is important to note that the major difference between mental imagery working and not working relates to the athletes ability to vividly imagine himself executing the desired skill or response.⁴

Methodology

45 male cricket players of Lakshmibai National Institute of Physical Education, Gwalior were selected as subjects for this study. All the subjects from cricket match practice group. These subjects however were from different classes of the institute i.e. from M.Phil, M.P.E., B.P.E.

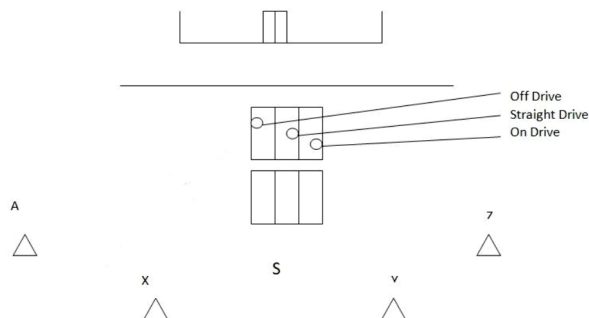
the most appropriate one. The subjects numbering forty five (N=45) in all were equally divided into two experimental groups and one control group; each group consisted of 15 subjects respectively.

Experimental Task

The test was selected from the Learn Cricket with Frank Tyson.⁵

The Front-Foot Straight Drive Test

- Set out the playing area and equipment and mark the creases and target area as in the diagram.
- Position of the players. Wicketkeeper (W), Fieldsman (F) Servers (S) and assessors (A) is indicated. No protective equipment is needed for the batsman.
- The Batsman (B) each face six balls thrown by the server.
- The server throws six deliveries on the marked full length area on the pitch and the batsman must drive the ball straight on front foot through the target area (x-y).
- The batsman receives five points every time he hits the ball with the correct stroke, along the ground and through the target area (30 points maximum).



Statistical Treatment

The data collected was treated by applying ANOVA in order to find out which training strategy is more effective in improving the performance of Front-Foot straight drive test.

A) Pre-treatment Performance Measurement:

Subject reported collectively at L.N.I.P.E., Gwalior cricket field. Following a standardized demonstration of the

(i) The Front-Foot straight Drive test

All subjects were allowed practice trails to his 2 pre-treatment performances.

B) Physical Practice Procedure:

The subjects of the physical practice group were instructed to

For this proposed study Random group Design seemed to be

actually perform the task. (Front-Foot Straight Drive)

Practice for 3 days a week for a duration 30 minutes under the researcher's control.

C) Psychological Exercise Procedure:

The investigator had selected, Start's⁶ (1960) experimental technique of mental practice.

At the subsequent sessions, the instruction concentrated on certain specific-aspects of the performance like –

1. Image Clarity/vividness.
2. Controllability of perceived images.
3. Simple strategies
4. Being positive and hopeful
5. Using role models
6. Individualized approach.

In some practices the students were asked to picture themselves from the time they left the static place, completely through the execution of the experimental task, and until they returned to the static place.

D) Control Group

In order to minimize any Hawthorne effects the subjects of the control group were required to perform during the same amount of time assigned to mental training group (MTG) and physical training group (PTG) (30 min./day thrice a week for 8 weeks) crossword puzzle tasks assumed to be neutral with regard to activity under investigation. This task was also performed under the control of the researcher.

E) Post-treatment Performance Procedure

After the 8th week's training session, subjects again gathered for the final test on an appointed day.

Result & Discussion of Findings

The statistical analysis of data collected on 45 subjects belonging to three different groups (Mental training group = MTG, Physical training Group = PTG, Control Group = CG) were presented in this chapter. The subjects were selected at randomly and divided into 3 groups. Mental training group and Physical training group were exposed to training programme thrice of a week and practiced for eight weeks. Control group was not exposed to training programme at all.

The data was examined by applying, one way analysis of variance. Analysis of variance with regard to mental training group, physical training group and control group was employed in this study and were equated with reference to the factor examined.

Findings

In order to find out the difference between means of two experimental groups and a control group with the performance of subject in front-foot straight drive, one way analysis of variance was used. The results were presented in table 1 and to see which group was better among the 3 groups the Post Hoc Test (LSD) was applied and was presented in 2.

Table – 1 Comparison of pre & post test means among 3 groups (mtg, ptg, cg) on front foot Straight drive test

Source of Variance	D.F.	SS	MSS	F ratio	
Pre test	A	2	3.33	1.66	0.16
	W	42	4.16	9.92	
Post Test	A	2	247.7	123.88	10.07*
	W	42	516.6	12.30	

*Significant at .05 level.

Tab F05 (2,42) = 3.21

N = 45

A = Among Means Variance

W = Within Group Variance

PTG = Physical Training Group

MTG = Mental Training Group

CG = Control Group

Table 1 revealed that in case of pre test calculated F-ratio(0.16) was less than tabulated F-ratio (3.21) that there was no significant difference among 3 groups (MTG, PTG, CG). Initially the randomization was quite successful. But in case of post test calculated F-ratio (10.07) was greater than tabulated F-ratio (3.21). Hence there was significant difference among 3 groups.

To further analyse which programme was better, a pair wise mean comparison analysis was used done by using least significant difference (LSD) test as shown in Table No. 2.

Table no. 2 Lsd table among 3 groups for front-foot straight drive

PTG	MTG	CG	MEAN DIFF.	CD at 5% level
11.67	9.67		2	2.56
	9.67	6	3.67	2.56
11.67		6	5.67	2.56

*Significant at .05 level.

The mean difference between MTG & PTG was found to be 2 which was less than the critical difference value 2.56. The mean difference between MTG & CG was found to be 3.67 which was greater than the critical value 2.56. The mean difference between PTG & CG was found to be 5.67 which was greater than the critical value 2.56.

It was observed from the findings that there was significant difference between the mental training and physical training in front foot straight drive. The reason could be attributed to the fact that mental training appeared to be effective in improving the performance of Front Foot Drive (Straight) possibly because the player can sequence and rehearse the order of movements in his mind.

Second, empirical findings also suggested that mental training was better utilized by highly skilled players than it is by novice performers. Apparently, some experience with the task is necessary for the positive effects of mental training techniques to be maximized.

Thirdly, because of the potentially deleterious effects of negative mental training, it was essential to clarify the appropriate content of the imager to determine exactly what was being practiced. Finally, it seemed evident that mental training cannot completely replace physical training in training of an athlete because physical training group was also significantly higher than control group.

Another reason could be that mental training activates many of the neural components in the brain that were responsible for actually directing movement. The component that was not, of course, fully activated in mental training is the motor component. Nevertheless, although all of the motor units that were activate when a movement was actually executed are not mobilized during mental training, there was convincing evidence that some of the motor units that are normally activated during movement execution are activated when a person mentally practices the movement⁷

Ryan, Blakeslee and Frust (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 vicariously reinforced and subsequently improves.⁸

The findings of the present study also revealed that control group did not significantly improve in front foot straight drive. This may be attributed to the fact that all the subjects were not introduced with any specific training program and due to this reason their performance level were almost similar as they were in initial position.

CONCLUSIONS

On the basis of the findings and within the limitations of this study the following conclusions may be drawn

1. The Mental training programme significantly improved the performance of front-foot straight drive in cricket.
2. All the groups (MTG, PTG and CG) showed better performance in Front-foot straight drive.

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