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EFFECTS OF PSYCHOMOTOR DRILLS ON SELECTED SKILL PERFORMANCE AMONG HOCKEY PLAYERS

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Abstract:

The purpose of the present study was to determine the effects of psychomotor drills on selected skill performance among hockey players. To achieve the purpose of the present study, thirty hockey players were selected from the Bharathidasan University, Tiruchirapalli, Tamil Nadu, India. The subjects were selected randomly and their age ranged from 18-25 years. The selected subjects were divided into two groups, experimental and control group. The experimental group consisted of fifteen Hockey Players and they underwent the psychomotor drill practices. Fifteen Hockey Players acted as the control group. The duration of the training period was restricted to six weeks and the session for six days in a week. Psychomotor drill is considered as the Independent Variables. The Dribbling and Hitting were known as Dependent Variables. The statistical technique Analysis of Covariance (ANCOVA) was used to analyze the pre-test and post-test data of experimental group and control group. The results showed that the psychomotor drill practice group had significant improvement ($P \leq 0.05$) in the level of the selected criterion variables such as Dribbling and Hitting compared to the control group.

Key Words: Psychomotor Drill, Dribbling, Hitting & Analysis of Covariance (ANCOVA)

Introduction:

Psychomotor fitness plays a significant role in hockey since during the game great changes in workload as well as frequent changes in game situations occur. In this form of fitness Psychomotor fitness is also necessary for information processing that enters the Central Nervous System and provides efficient decision making ability especially under conditions of incrassating fatigue

Skills play an increasingly vital role in the quest for victory of any game especially hockey. Players of the teams of national and international repute to perfect their skills and change them into a highly refined and sophisticated art. They constantly keep abreast of the developments in the field of hockey and work towards better performance. There are a number of skills involved in the game of hockey like dribbling, hitting, scooping, passing and tackling which play a vital role in the success of modem hockey. Skill sets have their own importance and applications to different situations. The motor abilities could well be used with the attainment of perfection in skills. Thus the total performance in the game is based on the perfection of these skills and execution of them successfully.

Statement of the Problem:

The purpose of the study was to find out the effects of psychomotor drills practices on selected skill performance among hockey players.

Hypothesis:

It was hypothesised that the psychomotor drills practices would improve the selected criterion variables among hockey players.

Methodology:

To achieve the purpose of this study, thirty hockey players were selected from the Bharathidasan University, Tiruchirapalli, Tamil Nadu, India. The subjects were selected randomly selected and their age ranged from 18-24 years. The selected subjects were divided into two equal groups of fifteen each. Group I (SMDG) was considered as an experimental group who underwent for six weeks psychomotor drills practices for six days in week and group II (CG) as a control group without any special training programme apart from curricular activities. Dribbling and Hitting were selected as variable for the study. The subjects of the two groups were tested on selected skill performance variables namely dribbling and hitting by using standardized tests namely Dribbling Ability Test and Straight Drive Hit at before and after the training period. The analysis of covariance (ANCOVA) was used to find out the significant difference between the groups of selected criterion variable separately.

Analysis of the Data:

The analysis of covariance on dribbling and Hitting of psychomotor drills practices group and control group have been analyzed and presented below.

Dribbling:

The analysis of covariance on dribbling of the pre and post test scores of psychomotor drills practices group and control group have been analyzed and presented in Table I.

Table 1: Ancova for the Pre and Post Tests Scores on Dribbling Among Psychomotor Drills Practice Group and Control Group

Test	PMDG Group	Control Group	Source of Variance	Sum of Squares	DF	Mean Squares	Obtained 'F' Ratio
Pre Test							
Mean	15.267	15.251	Between	0.002	1	0.002	0.35
S.D	0.046	0.090	Within	0.152	28	0.005	
Post Test							
Mean	13.820	15.247	Between	15.265	1	15.265	25.88*
S.D	0.254	0.137	Within	16.517	28	0.590	
Adjusted Post Test							
Mean	13.827	15.239	Between	14.773	1	14.773	353.33*
			Within	1.129	27	0.042	

* Significant at .05 level of confidence.

(The table value required for significance at .05 level of confidence with df 1 and 28, 1 and 27 were 4.20 and 4.215 respectively).

The adjusted post-test means of psychomotor drills practices group and control group are 13.827 and 15.239 respectively. The obtained "F" ratio of 353.33 for adjusted post-test means is greater than the table value of 4.215 for df 1 and 27 required for significance at .05 level of confidence on dribbling. The results of the study showed that there was a significant difference between the psychomotor drills practices group and control group on dribbling. The mean values of the psychomotor drills practices group and control group on dribbling were graphically represented in the Figure 1.

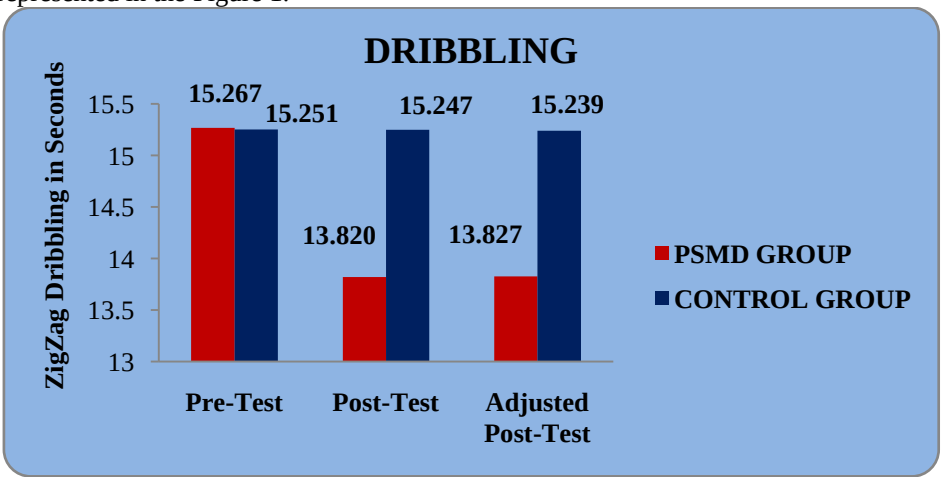

Figure- 1: Means Values of Psychomotor Drills Group and Control Group on Dribbling Among Hockey Players

Hitting:

The analysis of covariance on Hitting of the pre and post test scores of psychomotor drills practices group and control group have been analyzed and presented in Table II.

Table 2: Anova for the Pre and Post Tests Scores on Hitting Among Psychomotor Drills Practices Group and Control Group on Hockey Players

Test	PMDG Group	Control Group	Source of Variance	Sum of Squares	DF	Mean Squares	Obtained 'F' Ratio
Pre Test							
Mean	12.00	11.33	Between	3.33	1	3.33	0.44
S.D	2.45	2.87	Within	213.33	28	7.62	
Post Test							
Mean	20.00	11.67	Between	520.83	1	520.83	18.13 *
S.D	3.65	2.36	Within	804.17	28	28.72	
Adjusted Post Test							
Mean	19.70	11.97	Between	441.75	1	441.75	107.32*
			Within	111.13	27	4.12	

* Significant at .05 level of confidence.

(The table value required for significance at .05 level of confidence with df 1 and 28, 1 and 27 were 4.20 and 4.215 respectively).

The adjusted post-test means of psychomotor drills practices group and control group are 19.70 and 11.97 respectively. The obtained "F" ratio of 107.32 for adjusted post-test means is greater than the table value of 4.215 for df 1 and 27 required for significance at .05 level of confidence on Hitting. The results of the study showed that there was a significant difference between the psychomotor drills practices group and control group on Hitting. The mean values of the psychomotor drills practices group and control group on Hitting were graphically represented in the Figure-2.

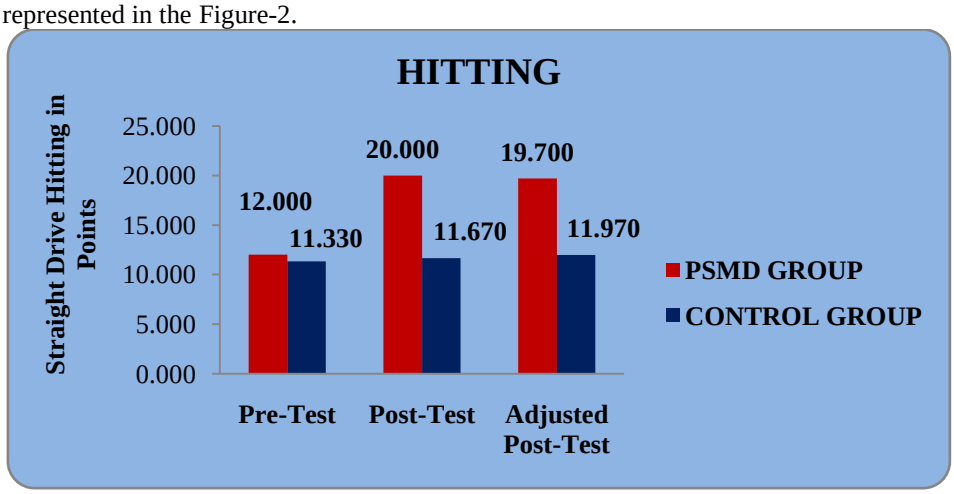

Figure 2: Mean Values of Psychomotor Drills Group and Control Group on Hitting Ability among Hockey Players

Discussion on Findings:

The results of the study indicate that the psychomotor drills practices were significantly improved the performance such as dribbling and hitting it may be due to the nature of the psychomotor drills which have influenced to increase the performance of hockey players. The results of the study indicate that there is a significant improvement on dribbling and hitting of the psychomotor drills practices group when compared to the control group. This study is supported by Wiggins et al. (2014) who found acquisitions of psycho-motor skills are important predictor of skill acquisition. The findings were further in agreement with the findings of Sangeetha and Pushparajan (2014) who found perceptual training group (PTG) and perceptual training and yoga training group (PYTG) had shown significant improvement in ($P<0.05$) the selected psychomotor variables and skill variables.

Conclusions:

The results of the study reveal that there is a significant improvement on dribbling and hitting in the psychomotor drills practices group when compared to the control group. These changes are due to training as well as due to participating in psychomotor training. The training inspires changes in dribbling and hitting of the hockey players. The unique profile should be taken into consideration while administering training to the hockey players.

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