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A COMPARATIVE STUDY ON ARM EXPLOSIVE POWER AND LEG EXPLOSIVE POWER AMONG VARIOUS UNIVERSITIES MALE KABADDI PLAYERS IN TAMILNADU

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ABSTRACT:

The purpose of the present study was to compare the selected physical fitness variables of arm explosive power and leg explosive power among the various universities male kabaddi players in Tamilnadu, India. To achieve this purpose, sixty inter university male Kabaddi players those participated in the State Level Open Inter University Tournament were selected. The age of the subjects ranged from 18-25 years. In the present Dependent variables such as Arm Explosive Power and Leg explosive power are handpicked. The collected data are statistical Analysis of Variance (One-way ANOVA) is used by the researcher to find out the significant difference. The significant was set at 0.05 level of confidence. In case of significant F ratio obtained, LSD's post hoc test was applied to test the significant differences between the ordered paired means. The results of the study show that there is a significant difference among the various universities kabaddi players on leg explosive power and arm explosive power. Subsequent the findings show that Bharathiar university and M.S university players kabaddi players significantly have greater performance on leg explosive than other universities. There was no significant difference found on arm explosive power various universities kabaddi players.



KEYWORDS: Kabaddi players, Arm Explosive Power, Leg Explosive Power, ANOVA.

INTRODUCTION

More than anything, it has been observed that the performance of Indian Kabaddi team is very encouraging at the international level. This has become a challenge to Kabaddi coaches and they have to be constantly motivated to maintain a high ranking at international level.

At present during selection of teams the emphasis is made only on skills and tactics without much consideration for other important factors such as Motor fitness etc. Hence the coaches and physical education teachers realize the importance of each factor for performance level as well as selecting a team. This aspect motivated the researcher to undertake this study.

Though few studies have been conducted on Indian male Kabaddi players, but not a single study has been conducted on the state level inter university male kabaddi players. The study has been faired on the Kabaddi Sub Junior Players represents in their respective states in the National Meet. The purpose of delimiting the study to South Indian players is because of its familiarity and

feasibility. Kabaddi is one of the most attractive and famous rural and urban sport of the South Indian mass. Hence, the study is delimited to the state level inter university male kabaddi players.

MOTOR ABILITY AND KABADDI PERFORMANCE

Combination of several movements such as speed, strength, balance, coordination, and flexibility contributes to the execution of total movement. There are several factors that contribute to the successful performance in any given sports. A 'motor ability' which is a term sometimes referred as general athletic ability. Motor ability has been defined as "the present acquired and innate ability to perform motor skills of a general of fundamental nature, exclusive of highly specialized sport or Gymnastic techniques". This definition implies that motor ability is a combination of the innate and the acquired. Its present developed status is subject to change in relation to the amount of practice and training. Many studies conducted on the relationship between motor abilities and performance in sports and games showed significance relationship.

Kabaddi requires tremendous physical stamina, agility, individual proficiency, neuromuscular coordination, balance, lung capacity, quick reflexes, intelligence and presence of mind on the part of both attackers and defenders. In kabaddi the basic defense position are in three zones, center zone, right zone and left zone, the defense player occupying one of these zones have specific functions to perform in co-ordination with his counterparts in the other defense zones, for maintaining the defensive strong hold. The player is identified by the position he occupies irrespective of the varying number of offense and defense players. It's known that game of Kabaddi requires a high level of motor fitness and neuro-muscular coordination in order to perform very complex movement of the game at senior level. But to achieve the higher performance in the game of Kabaddi at state level inter university what are bio motor qualities are needed, this has to be tested by the expert.

METHODOLOGY:

To achieve the purpose of the study, the researcher has selected sixty University Kabaddi players of Tamilnadu, India who have participated in the 1stTamilnadu state Inter University Championship organized by Kumaraguru College Technology, under the auspices of Tamilnadu State Kabaddi Association and Amateur Kabaddi Federation of India on 2nd to 4th February, 2019, representing their respective universities such as SRM University, Alagappa University, Bharathiar University, Vinayaka Mission University and Manonmaniam Sundaranar University were selected randomly. The age ranged from 18-25 years. The selected variables are such as Arm explosive power and Leg explosive power. The following tests. Arm explosive power two hand medicine ball put in meters, Leg explosive power assessed five double leg bounds in meters. The collected data were statistical Analysis of Variance (One-way ANOVA) is used by the researcher to find out the significant difference. The significant is set at 0.05 level of confidence. In case of significant F ratio obtained, LSD's post hoc test was applied to test the significant differences between the ordered paired means.

TABLE - 1
RESULTS OF ONE -WAY ANOVA SCORES OF VARIOUS UNIVERSITY MALE KABADDI PLAYERS IN TAMILNADU

Variables	Groups	Sum of Squares	df	Mean Squares	F Value
Leg explosive power	Between Groups	17.789	4	4.447	6.474*
	Within Groups	37.783	55	0.687	
Arm explosive power	Between Groups	1.134	4	0.284	1.493
	Within Groups	10.446	55	0.190	

Table value at 0.05(df-4, 55) =2.52

The F-value obtained from the testing the adjusted means among the five universities on the criterion measures are shown in the table-1, the corresponding F- values need significance at 0.05 level of confidence is 2.52. the calculated F-values on leg explosive power (6.47) and arm explosive power (1.49). Since observed F-values of these are found greater than the required table value of 2.52 at 0.05 level of confidence. The observed mean difference on leg explosive power is statistically significant among the various universities kabaddi players. But there was no significant difference found arm explosive power among the various universities kabaddi players. In order to find out which pairs of group leg explosive power has shown the significant difference when the scheffe post-hoc test was applied. The results of the same given in the table-II

TABLE - 2
POST HOC TEST FOR THE MEAN DIFFERENCE IN RELATION TO LEG EXPLOSIVE POWER
OF VARIOUS UNIVERSITY MALE KABADDI
PLAYERS IN TAMILNADU

Variables	Various University in Tamilnadu					Mean Difference (MD)	CI value
	Bharathiar university	SRM University	MS University	Vinayaka Mission University	Alagappa University		
Leg explosive power	10.777	9.793	-	-	-	0.984*	0.68
	10.777	-	10.343	-	-	0.434	
	10.777	-	-	9.743	-	1.034*	
	10.777	-	-	-	9.190	1.587*	
	-	9.793	10.343	-	-	0.550	
	-	9.793	-	9.743	-	0.050	
	-	9.793	-	-	9.190	0.603	
	-	-	10.343	9.743	-	0.600	
	-	-	10.343	-	9.190	1.153*	
	-	-	-	9.743	9.190	0.553	

As per the results of the table-1 since the mean difference on leg explosive power between Bharathiar university and SRM university, Bharathiar university and MS university, Bharathiar university and Vinayaka Mission University, Bharathiar university and Alagappa University were 0.98, 1.03 and 1.58 respectively are higher than the CI value of 0.68. the mean difference on leg explosive power between Bharathiar university and SRM university, Bharathiar university and Vinayaka Mission University, Bharathiar university and Alagappa University, MS university and Alagappa university were 1.15 respectively are higher than the CI value of 0.68. It was been concluded that the observed adjusted mean difference is statistically significant. The rest of comparison among the universities with the obtained mean difference is lesser than the CI values. It is concluded that the observed adjusted mean difference is statistically not significant.

DISCUSSION ON FINDINGS:

The results of analysis of covariance on comparative results revealed that the mean difference existing between Bharathiar university and SRM university, Bharathiar university and Vinayaka Mission University, Bharathiar university and Alagappa University, M.S university and Alagappa university on leg explosive power.

The mean difference existing between is on arm explosive power only there was no significant founded.

CONCLUSION:

Based on the results of the study it is concluded that BU has better performance than other universities on leg explosive power.

Further it is concluded that arm explosive power there was no significant founded other universities.

RECOMMENDATIONS:

1. Based on the results similar studies may be conducted for correlation of fitness and defensive and offensive skills.
2. The result of this study was of great interest to physical educators, coaches and to the players, as they would be able to assess the morphological characteristics and motor abilities for efficient game performance.
3. The results also helped the physical educators to set the norms for the selection of Kabaddi players
4. Similar studies may be conducted on different age group.
5. It may be recommended to carry out similar studies with national/international players.
6. The study may be repeated with greater number of subjects.
7. It is recommended that more intensive research may be undertaken in other sports where the criterion used for measuring success is the game performance.

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