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Short Communication

Criterion performance physical fitness components relation with Kabaddi playing ability

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Abstract

This study is intended to selected performance physical fitness components relation with Kabaddi playing ability. Data is gathered from 82 male kabaddi players of Senior and Junior National Level representation of Andhra Pradesh and Telangana states are chosen. The age group of players are ranged from 17 to 19 years. The selected performance physical fitness components are Respiratory Endurance, Strength, Dynamic Balance, Static Balance, Foot Reaction Ability, Speed, Hand Reaction Ability, Movement Speed, Agility, Passive Flexibility, Active Flexibility, Accuracy, Co-Ordination Ability, Endurance, Power. The data is analyzed and apply Pearson product moment correlation method which is set at 0.05 level of significance. The finding revealed Respiratory Endurance (0.585), Dynamic Balance (0.259*), Foot Reaction Ability (0.259*), Hand Reaction Ability (0.237*), Movement Speed (0.364*), Agility (0.449*), Active Flexibility (0.326*), Accuracy (0.393*), Co-Ordination Ability (0.296*) and Power (0.523*) are significant positive correlation with kabaddi players playing performance at 0.05 level of significance. The remaining physical fitness are Strength (0.112), Static Balance (0.054), Speed (0.154), Passive Flexibility (0.189) and Endurance (0.112) have no significant connection with playing ability of kabaddi performers. This study mentor to achieve top performance relation with Respiratory Endurance, Dynamic Balance, Foot Reaction Ability, Hand Reaction Ability, Movement Speed, Agility, Active Flexibility, Accuracy, Co-Ordination Ability and Power.*

Keywords: Kabaddi, Performance Physical Fitness, Criterion components, Playing Ability.

Introduction

Kabaddi is a contact sport that invented in ancient India subcontinent. It is Indigenous known by its regional names in different areas of subcontinent, such as "Chadukudu" in Tamil Nadu, Kabaddi in Karnataka, Telangana, Hadudu in Bangladesh, Bhavatik in Maldives, Kaunbadi in the Panjab region and Chedugudu in Andhra Pradesh. Kabaddi Is the national sport of Bangladesh and state game of Andhra Pradesh state.

Harre (1979) said for a high level of performance physical fitness components is most significant. Consequently, physical fitness is considered to be central criterion for increasing an effective system of selection team approach[1].

In the performance and high performance sport, a great importance is given to the physical condition. It is in fact the preoccupation for the adaptation of the sportsman's body to growing physical and mental efforts, to which all the parts of the human body participate.

The contemporary Kabaddi game, characterized by high strength motor activities, places upon players a wide variety of requirements on all their competences. One can hardly single out any ability or a characteristic which is not occupied in the performance of Kabaddi players.

Kabaddi is a strength and breath control game. Without endurance the player cannot perform well, in the same time the player's need to all the variables i.e. speed, agility, flexibility, endurance and so on. Nowadays most of the players having good height can perform well in the game situation. Without physical characteristics players cannot achieve the aim of the game, so physical characteristics is very essential for the better performance of Kabaddi[2].

Methodology

Purpose: This study investigate criterion Performance Physical Fitness Components Relation with Kabaddi Playing Ability.

Selection of the subjects: 82 male kabaddi players of senior Junior National Level contribution of Andhra Pradesh and Telangana states are chosen. The age category of players are vary from 18 to 20 years. During the academic year 2015-16.

Hypothesis of the study: As for the result, performance physical fitness components would be significantly association with kabaddi playing performance in the competitions.

Table-1: Collection of the Data and Tests[3]

Physical Fitness Components	Test
Respiratory Endurance	Cooper 12 Mints Run /Walk
Strength	16 Pounds Medicine Ball Put
Dynamic Balance	Walking On Balancing Beam
Static Balance	Stork Balance Stand
Foot Reaction Ability	Nelson Foot Reaction
Speed	50 Mts Run
Hand Reaction Ability	Nelson Hand Reaction
Movement Speed	Speed Movement
Agility	Illinois Agility
Passive Flexibility	Bridge Up
Active Flexibility	Sit And Reach
Accuracy	Shooting
Co-Ordination Ability	Co-Ordination
Endurance	600 Yard Dash
Power	Standing Broad Jump

Table-2: Criterion Measurements.

Cooper 12 Mints Run /Walk	To recorded in nearest one tenth of the second.
16 Pounds Medicine Ball	To measure nearest centimeter.
Walking on balancing beam	Best of three attempts the total time is noted in seconds.
Stork Stand Balance	Best of three attempts the total time is noted in seconds.
50 Mts Run	To take time in nearest one tenth of the second.
Nelson Foot Reaction	Numbers on the timer represent thousandth of a second.
Nelson Hand Reaction	Numbers on the timer represent thousand of a second.
Speed Movement	Combined response of movement's recorded.
Illinois Agility	To recorded in nearest one tenth of the second.
Bridge Up	To measure nearest centimeter.
Sit and Reach	To measure nearest centimeter.
Shooting	To measure accuracy point.
600 Yard Dash	To take in nearest one tenth of the second
Standing Broad Jump	To measure nearest centimeter.

Results and discussion

Karl Pearson product moment coefficient of correlation is used to evaluate the data to assess the relation with performance physical fitness components among overall Kabaddi players playing performance[3].

Table-3: Criterion performance Physical Fitness Components Association with Kabaddi Playing Ability.

S.No	Physical Fitness Components	Coefficient Of Correlation 'r'
1	Respiratory Endurance	0.585*
2	Strength	0.112
3	Dynamic Balance	0.259*
4	Static Balance	0.054
5	Foot Reaction Ability	0.259*
6	Speed	0.154
7	Hand Reaction Ability	0.237*
8	Movement Speed	0.364*
9	Agility	0.449*
10	Passive Flexibility	0.189
11	Active Flexibility	0.326*
12	Accuracy	0.393*
13	Co-Ordination Ability	0.296*
14	Endurance	0.112
15	Power	0.523*

N=82, $r_{.05\,(80)}$ =0.217, *significant at 0.05 level.

The above table shows that coefficient of correlation to Respiratory Endurance (0.585*), Dynamic Balance (0.259*), Foot Reaction Ability (0.259*), Hand Reaction Ability (0.237*), Movement Speed (0.364*), Agility (0.449*), Active Flexibility (0.326*), Accuracy (0.393*), Co-Ordination Ability (0.296*) and Power (0.523*) are significant positive correlation with kabaddi players playing performance at 0.05 level of significance.

The remaining physical fitness components are Strength (0.112), Static Balance (0.054), Speed (0.154), Passive Flexibility (0.189) and Endurance (0.112) have no significant association with players playing ability of kabaddi.

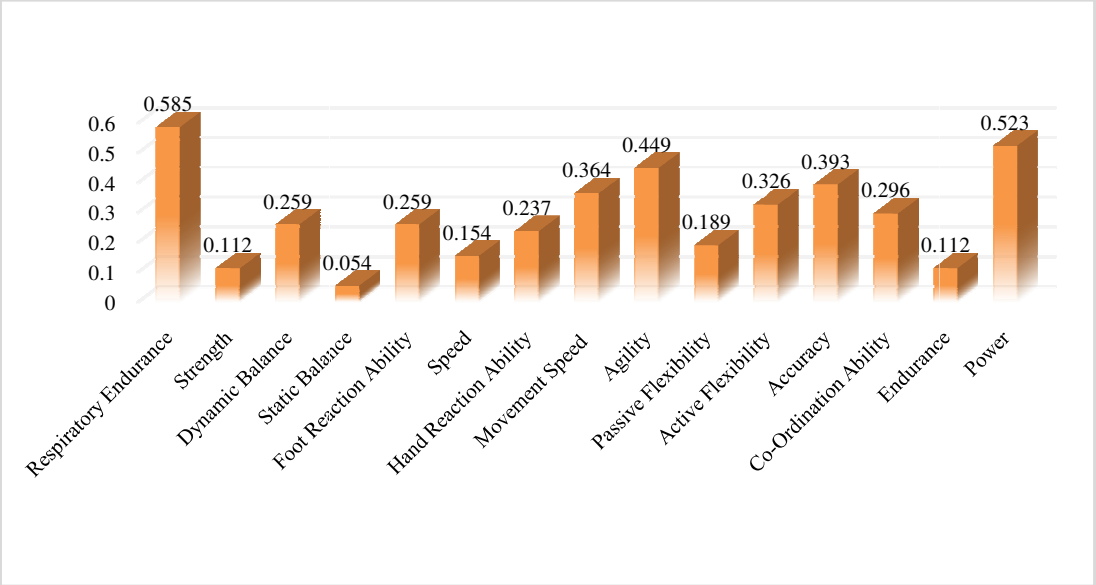

Figure-1: Performance Physical Fitness Components Graphical Representation

Finally as for the result, this study advise to achieve top performance association with performance physical fitness components are Respiratory Endurance (0.585*), Dynamic Balance (0.259*), Foot Reaction Ability (0.259*), Hand Reaction Ability (0.237*), Movement Speed (0.364*), Agility (0.449*), Active Flexibility (0.326*), Accuracy (0.393*), Co-Ordination Ability (0.296*) and Power (0.523*) have positive correlation of coefficient at 0.05 level of significance.

Conclusion

As for the result, Physical Education Teachers, coaches and trainers would concentrate performance Physical Fitness Components are Respiratory Endurance (0.585*), Dynamic Balance (0.259*), Foot Reaction Ability (0.259*), Hand Reaction Ability (0.237*), Movement Speed (0.364*), Agility (0.449*), Active Flexibility (0.326*), Accuracy (0.393*), Co-Ordination Ability (0.296*) and Power (0.523*) on their training program or training schedule. It will maintain top performance in the particular competition.

Reference

1. Kumar Ravinder (2014). Kinanthropometric and fitness variables as predictors of kho-kho playing ability (Unpublished Doctoral Dissertation). Himachal Pradesh University, Shimla-5.

2. Devaraju K. and Needhiraja A. (2012). Prediction of Kabaddi Playing Ability from Selected Anthropometrical and Physical Variables among College Level Players. *International Journal of Advanced Research in Engineering and Technology*, 3(1), 115-120. http://www.iaeme.com/IJARET/issues.asp?JType=IJARET&VType=3&IType=1

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