ACADEMIC SPORTS SCHOLARS

ISSN: 2277-3665
IMPACT FACTOR : 5.3149(UIF)
VOLUME - 6 | ISSUE - 11 | NOVEMBER - 2017

A STUDY ON PREDICTION OF KABADDI PLAYING ABILITY FROM SELECTED MOTOR FITNESS COMPONENTS AMONG COLLEGE MALE STUDENTS

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ABSTRACT: -

The study was proposed to predict Kabaddi playing ability from selected motor fitness components among inter-collegiate male Kabaddi players. To achieve the purpose of the study One hundred and twenty Kabaddi players from various degree colleges affiliated to Gulbarga University ranging in the age group of eighteen to twenty three years players were selected as subjects. The Kabaddi playing ability was selected as criterion variable, and the motor fitness components (explosive power, agility, speed, and speed endurance) were considered as independent variables in this study. The standardized means and methods were used to assess the selected criterion and determinant variables. The data thus collected were statistically examined by applying Pearson product moment coefficient of correlation to find out the existence of significant relationship and multiple regression analysis to analyze the predominant factors. The α value of 0.05 was set for statistical significance. The outcome of the study demonstrates that statistically significant relationship subsists between Kabaddi playing ability and selected motor fitness components, and establishes that the Kabaddi playing ability can be predicted on the basis of agility and explosive power.

KEYWORDS: *Kabaddi, Motor fitness, Explosive Power, Agility, Speed and Speed Endurance.*

INTRODUCTION :

Sports in the present day have become extremely competitive, previous records are being broken whenever there is competition. It is not mere participation or few days practice that brings an individual victory, but the continuous hard work of training right from childhood, a strong Anthropometry variables may influenced. Today's sports person faces some unique challenges. The standard are higher, the competition is tougher the stakes are greater attention in these days. Coaches' physical educationists and sports scientists have always expressed a great need to know more about those Anthropometry variables, which are helpful in improving the motor skill of the players. Today's world is a world of competition, the rivalry to reach top and excel each other is so much. That every aspect that contributes for the excellence is carefully looked in it one of such aspects is the selection of the right person for the right event in sports and games, normally a choice of selection is given to that the player or the athletes. The players without knowing their inherent potential made wrong choices because of his wrong selection the individual concern is not able to reach the top of the ladder (Gangopadhyay, 1993).

Application of science and technology has greatly influenced modern sports. Sports performances are reaching to newer heights and success in sports performance today is not only a chance. Based on the knowledge of modern sports sciences, scientific

principles of training and coaching and application of sophisticated modern testing and measuring techniques, it has now become possible to predict performance of the athletes at different levels of competitions.

Kabaddi is a popular game in India. With the introduction of the game in the Asian and other international competitions, the popularity has grown. The competition has increased the performance of players in leaps and bounds. The Kabaddi players require various qualities physical and mental. Kabaddi being a combative team game is also called the game of agility, good lung capacity, muscular coordination, presence of mind and quick reaction ability and various psychological parameters. The performance in competition is determined by various physiological, morphological, sociological factors.

In today's age of scientific knowledge man is making rapid progress in all walks of life and it is true in the area of games and sports. Sports performance is indeed an aspect of complex human performance, which has several dimensions. Sports scientists often acknowledge that a world-class performance is the result of several factors, advocating a multidimensional approach in studies on talented players (Regnier et al., 1993; Reilly et al., 2000). Burwitz et al. (1994) also recommend interdisciplinary performance-related sports science research.

There are two predominant methods that broadly capture how talented athletes are currently identified within sport: (a) natural selection, and (b) scientific selection (Bompa, 1999). 'Natural selection' is aimed at identifying talented individuals that are already participating within a sport due to the recognition of performance or scouting. As such, 'natural selection' processes rely on talented individuals to 'happen upon' the sport they are most likely to excel in even though involvement may result purely from peer or parental interests, proximity of facilities, or of the sport's popularity in that geographical area.

Greenberg (1999) reported that young athletes are less likely to become involved in less popular sports, even though their talent may be greater within these sports. Whilst the ability of scouts or coaches to identify talented individuals should never be underestimated, it is a very subjective process (Williams & Reilly, 2000), and the odds against identifying children who have the talent to become a successful adult performer are likely to be enormous.

Identifying attributes that characterize exceptional performers has interested researchers for many years (e.g., Regnier et al., 1993). When individuals excel at international sporting events, questions are often asked with regards to what factors enable the athlete to produce such outstanding performance.

Successful performance in sports is influenced by morphological and anthropometric characteristics such as body size and composition, functional parameters (physical capacity) (Scott, 1991; Singh et al., 2010) and fitness (strength, speed, anaerobic and aerobic capacity, agility) (Nikitushkin & Guba, 1998). The ability of a player in a team game like Kabaddi emanates from various anthropometric and physical fitness parameters of the players. It would be of interest to identify the motor fitness components that predicts playing ability of Kabaddi players, as there has been a scanty of research with regard to it. Hence, the investigator is motivated to determine the motor fitness components that evolve the sports playing ability. The present paper was proposed to predict Kabaddi playing ability from selected motor fitness components among inter-collegiate male Kabaddi players.

METHODS AND PROCEDURES:

One hundred and twenty Kabaddi players selected from various degree colleges, Gulbarga University area Karnataka, India, in the age group of eighteen to twenty three years players were selected as subjects with an informed consent. The study was restricted to the objective assessment of selected motor fitness components (explosive power, agility, speed, and speed endurance) and subjective rating of playing ability by judges. The motor fitness components were assessed utilizing calibrated instruments, standardized methods, procedures and tests.
The experimental design used in this study was cross sectional design involving convenient sampling for selecting the subjects of the study. The data thus collected were statistically examined by applying Pearson product moment coefficient of correlation to find out the existence of significant relationship and the procedure of stepwise method of multiple regression analysis to analyze the predominant factors. The α value of 0.05 was set for statistical significance.

Results:

The descriptive analysis of the data collected on various determinant and criterion variables is presented

in Table 1.

Table 1: Descriptive Statistics

Variables	Mean	Std. Deviation
Explosive Power	58.02	1.55
Agility	11.75	0.72
Speed	5.83	0.38
Speed Endurance	13.38	0.32
Kabaddi Playing Ability	7.81	0.89

Source: Primary data

The relationship between the criterion and determinant variables and inter relationship between determinants variables were calculated using the method of Pearson product moment correlation. The correlation coefficients thus obtained is presented in Table 2.

Table 2 reveals that the correlation coefficients of the criterion variable with the determinant variables vary from 0.852 for explosive power to -0.949 for agility. The correlation coefficient of the Kabaddi playing ability with explosive power, agility, speed, and speed endurance, ensures a significant relationship at 0.01 level of confidence, since the obtained coefficient of correlation is greater than the required table value of 0.160 and 0.209 respectively at 0.05 and 0.01 level for 163 degrees of freedom.

Table 2: Correlation Matrix

Motor Components	Explosive Power	Agility	Speed	Speed Endurance	Kabaddi Playing Ability
Explosive Power	1.000	-.931**	-.889**	-.831**	.852**
Agility		1.000	.970**	.953**	-.949**
Speed			1.000	.950**	-.913**
Speed Endurance				1.000	-.927**
Kabaddi Playing Ability					1.000

Source: Primary data

* Significant at 0.05 level. Table value required for significance is 0.160.

** Significant at 0.01 level. Table value required for significance is 0.209.

High multiple correlation results when the determinant variables correlate high with criterion, whereas, low correlation between determinant variables (Clarke & Clarke, 1987). The stepwise multiple correlations was utilized to select the minimum number of independent variables that would provide the highest multiple correlations coefficient with the criterion variable and to select them in the order of priority to the correlation.

The process of Stepwise multiple regression analysis is presented in Table 3.

Table 3: Regression Analysis of Selected Motor Fitness Components

Predictors	R	R Square	Adjusted R Square	Std. Error	%Common Variance	F
Agility	.949	.900	.899	.28154	68%	1.467E3
Agility, Explosive Power	.952	.907	.906	.27228	70%	790.210

Source: Primary data:

In the process of computing multiple correlations on Kabaddi playing ability, selected motor fitness components namely: agility and explosive power were selected with the zero-order correlation coefficient of -0.949 and 0.852. Out of the four independent variables, two variables were selected to derive stepwise multiple regression equation by obtaining a higher multiple correlations.

The obtained R2 value of 0.907 denotes that agility and explosive power having 70% common variance

with Kabaddi playing ability and the corresponding F ratio of 790.210 is significant at 0.05 level.

The results of the study indicate that Kabaddi playing ability can be the composite effect of selected motor fitness components. Thereby, the equation that derives Kabaddi playing ability is as follows:

Kabaddi Playing Ability = 32.365 – 1.443 (Agility) – 0.131 (Explosive Power)

As early as the 1920s, researchers were examining the potential of anthropometric and physiological measures as discriminating factors between athletes involved in different sporting events. The motor fitness components such as explosive power, agility, speed, and speed endurance has been a fundamental prerequisite for better Kabaddi playing ability. The motor fitness components are of enormous value for talent identification, as it is considered to be way for success.

Profiling young children on 'innate' anthropometric and physiological measures will enable the identification of individuals who have the potential to be successful in a specific event (Petiot, Salmela, & Hoshizaki, 1987). The knack to categorize young people whose profile is consistent with that of elite players may improve the progress in sport of the person by giving information about future success.

CONCLUSIONS:

The outcome of the study demonstrates that statistically significant relationship subsists between Kabaddi playing ability and selected motor fitness components, and establishes that the Kabaddi playing ability can be predicted on the basis of agility and explosive power.

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