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### Study of motor fitness of judo players in relation to different level of participation

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#### Abstract

The purpose of this study was to find out the relation of motor ability of judo players with different level of participations. For this purpose a sample of 45 boys judo players were selected of the age group of 18 to 28 years. The district, state and national three level of players were selected for the study. In the yogic practices of Asana and pranayama practices were given for eight weeks. The Vital capacity, hemoglobin level, systolic and diastolic blood pressure was measure as physiological variables. The data of pre-test and post-test were obtained and find out the significant different were determine with paired t-test. The level of significance was set at 0.05. The results of this study showed that there was significance different between pre-test and post-test of vital capacity and hemoglobin level whereas there was no significant different in systolic and diastolic blood pressure of college students.

**Keywords:** Motor ability, strength, speed, endurance

#### Introduction

Technology and Sciences have enabled Modem Youth to develop physical capabilities beyond imagined. During the twentieth first century, sports become a cultural phenomenon of great magnitude and complexity, having consequences for both the individual and society at large. Sports have been a part of Civilized Society throughout history. The very elaboration of sports its internal conventions of every kind to ceremonies, and its endless meshes entangling itself are for the purpose of training, testing, and rewarding. This is not merely fun, games and diversions or entertainment. In sports athletes often strive for perfection, just as many do in religious orders. In sports as in religion, there are heroes and heroines who provide roll models for the perfection to be strived for, who are admired for what they did, becoming almost, Like saint, such is the religious nature of sports.

Since ancient times, spots activities in the shape of running, jumping and throwing have been a natural part of man's existence whether it was hunting animals for food or escaping from the wild and dangerous species. However, lately these actives become pleasurable and competitive. Leading to do desire for improving his own speed of movement or ability to complete in those competitions. The development in the present century in all walks of human life has surpassed the progress of thousands of years and sports are also a part of life. It has become a very important and integral part of the total educational process. Through the well diverted programme, children develop skills for the use of leisure time, engage in activities that are conducive to healthy living and all these endeavours lead to their physical, social mental and emotional health. In competitive sports, there is interplay of numerous factors, physique and condition of health psychic values, general physical fitness, technical efficiency, specific, capacity of the organism, tactical skills and competitive experience are some of the principle factors which influence results attained by sports persons. The present state of competitive sports that is the peek performance of large number of sports persons in a great majority of sports disciplines come close to the prevailing world records is a proof that great performance in sports in no longer a primarily question of available facilities and even, less, often the results of purely individual efforts. But the out come of deliberately planned, scientifically based advanced training techniques designed to improve the standard of performance. Now it has become a necessity to identity and selects a future elite sports person's right in childhood or adolescence.

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It takes many years of intensive regular training till an international sports performance level is achieved. Each individual or team which participates in any sports event wants to win, because society attaches great significance "winning". According to Renews (1972) [13] 'Performance is the keynote of all sports is basic principle. Since sports have become a prestigious aspect to prove one's superiority, the philosophy of participation in game and sports has undergone a great change.

### **Review of Literature**

Paramedic (2002) [12] predicted an equation of physical and physiological variables of playing ability of badminton players out of 22 variables, 25 male badminton players of Maharashtra State were drawn to act as subjects, forward regression was applied to draw out the regression. The equation consisted of four items namely reaction time, height, arm length and endurance which accounted for 87% of the variance whereas reaction time alone contributed 55% of the variance.

Singh (2003) [16] conducted a study of physical fitness status of students of Department of Physical Education, Punjabi University Chandigarh and Kurukshetra. He collected data on 34 male subjects and 27 female by using AAHPER Physical Fitness Test. The students of Kurukshetra University were found superior on over all physical fitness status whereas girls of Punjab University were significantly better than Kurukshetra in speed and agility components. However, no significant difference was observed in overall physical fitness between the subjects of both the universities.

Sharma (2004) [14] conducted a study to construct and standardise motor fitness for elementary school children of Delhi. His sample included five hundred boys and girls. The study was conducted in two phases. In the first phase, he developed motor fitness battery by using factor analyses technique namely, (i) Softball throw, (ii) Toe touching, (iii) Double foot balance, (iv) 50 Mt. Dash, (v) 800 Mt. run/walk for girls scale on all the five components of motor fitness for future use.

The tempo of the game is set by the ability of the Judo Players as it involves a fascinating array of skills and qualities, quickness of foot and speed of hand are combined with balance, coordination strength, power, stamina and endurance. Quick tactical decision along with other qualities such as patience, concentration, calmness and handling opponent pressure etc. are needed in the game of Judo. Technical skill, deception, tactical ability, fitness and good mental approach attribute the Judo players to be good players. Their performance of skills requires a good motor ability physical fitness and mental abilities.

The coordination process of all these factors forms the basic of coordinative abilities which is recognized as components of motor abilities along with strength, endurance, speed, flexibility, ability and reaction time. Henry Franklin (1980) [6] referred to the factors of speed, ability, balance, coordination, power and reaction time as elements of motor fitness.

### **Motor Fitness/Motor Abilities**

Motor fitness has been defined as a readiness or preparedness for performance with required for big muscle activity without undue fatigue (Barrow). It includes the capacity of individual to move efficiently and with strength and force over a reasonable length of time. Motor fitness is, only a limited phase of physical activities which includes, at least average capacity in wide variety of fundamental's. Motor activities,

balance, flexibility, agility. Power and the activity are sufficient in any game. For example in swimming it will become the ability to swim and ability to save life. In average skill, the running, jumping, climbing, crawling and throwing are the basic skills which make fundamental and all these are highly related to total fitness in some manner and these cannot be separated into divisible parts for development.

### **Objectives of the Study**

The main objective of the study was to test the correlation of motor fitness variables of Judo players with different levels of participation

### **Method and Procedure**

In the present investigation 90 male and female Judo players belonging to Haryana of different levels of participation was selected as subject. They are divided in three categories i.e. 1<sup>st</sup> level (state/inter-college) 2<sup>nd</sup> level (intervarsity/ national) and 3<sup>rd</sup> level (international) belongs to Haryana state. All the subjects had more than 5 years of training age. These players are still active performers during collection of data. They are in the age group of 18 to 28. The investigator was to find out the relationship among variables with the different level of participation. The data related to motor fitness was collected with the Barrow motor ability test (1957).

The team consisted of investigator and four to five co-workers (physical education teachers, Judo coaches and senior Judo Players) was contacted the Principals of institutions, Director of sports, secretary of Judo Association etc. The purpose of the study was explained to them and after ensuring that the players (subjects) was present in all the test items.

### **Statistical Tools to be used**

To find out the relationship between the motor fitness components and performance in Judo game was established for each item by computing Pearson Product Movement Method of coefficient of correlation was used. To reach the objective of the study which is to compare motor fitness variables with different level of participation to test the hypothesis and .05 level of significance was used for test the significant correlation.

### **Results of study**

**Table 1:** Correlation of Barrow motor ability of Female Judo players Between State and National

Parameters	N	Correlation Coefficient (r)	Strength
SBJ	15	.210	Weak Positive
Zig Zag run	15	-.085	weak Negative
Ball Put	15	.046	Weak Positive
Push up	15	.126	Weak Positive
Sit Ups	15	.133	Weak Positive
50 m Dash	15	.341	Weak Positive
600 Run Walk	15	.451	Weak Positive

Table -1 shows that the correlations of female judo players between state and national Judo players of SBJ, Ball put, Push up, Sit Ups, 50 m Dash, 600 Run/Walk are positive but not significant at .01 level of significance. Only Zig Zag run, has negative and significant correlation between state and national Judo players at .05 level of significant.

**Table 2:** Correlation of Barrow motor ability of Female Judo players Between State and International

Parameters	N	Correlation Coefficient (r)	Strength
SBJ	15	-.226	weak Negative
Zig Zag run	15	.258	Weak Positive
Ball Put	15	.677**	High Positive
Push up	15	.209	Weak Positive
Sits Up	15	.219	Weak Positive
50 m Dash	15	.301	Weak Positive
600 Run Walk	15	.566*	High Positive

Table -2 shows that the correlations of female judo players between state and international Judo players of Ball put and 600 Run/Walk are high positive and significant at.01 level of significance and Zig Zag run, Push up, Sit Ups, 50 m Dash, are positive but not significant at.01 level of significance. Only SBJ, has weak negative correlation between state and international Judo players at.05 level of significant.

**Table 3:** Correlation of Barrow motor ability of Female Judo players Between national and International

Parameters	N	Correlation Coefficient (r)	Strength
SBJ	15	.011	Weak Positive
Zig Zag run	15	.355	Weak Positive
Ball Put	15	-.021	Weak Negative
Push up	15	.223	Weak Positive
Sits Up	15	-.404	Weak Negative
50 m Dash	15	.359	Weak Positive
600 Run Walk	15	.195	Weak Positive

Table -3 shows that the correlations of female judo players between national and international Judo players of SBJ, and 600 Run/Walk are weak positive and not significant at.01 level of significance whereas Ball put and Sit Ups has weak negative correlation between national and international Judo players at.05 level of significant.

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