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## **REVIEW ARTICLE**

# **STUDY OF PHYSICAL FITNESS AND PSYCHOLOGICAL VARIABLES OF JUDOKA'S AT DIFFERENT LEVELS OF PARTICIPATION**

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# Study of Physical Fitness and Psychological Variables of Judoka's At Different Levels of Participation

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## INTRODUCTION

Physical fitness is the nucleus of sports. Physical fitness of a player is affected by age, sex, diet and environment. Proper co-ordination of these factors can lead a player to the peak performance. In combative games like judo, wrestling, Judo etc. physical fitness plays an important role. Its component i.e. speed is the most important. A Judokas has to do punching and footwork with high speed. For this purpose physical fitness is most essential. Because Judo is a combative game, in this game to dominant the opponent and to protect himself physical fitness is essential. To work against resistance and to impress the opponent for maximum time, a player needs high level of endurance in Judo. For quick and affective movements agility and flexibility plays an important role. In nutshell we can say that physical fitness and its components plays an important role in Judo. Physical fitness differs from game to game, a gymnaster requires much less than those sportsmen who is participating in competitive sports like Judo, judo, football players require much greater strength, endurance, speed and suppleness to give better performance in these activities.

Psychology plays an important role in Judo as well because a player has to understand the behaviour of the opponent and has to change strategy accordingly. To put the psychological pressure on the opponent, a Judokas should be psychologically fit. The psychological factor which effect a Judokas directly are, anxiety, motivation, aggression, attitude arousal and activation, attention & concentration, mental imagery, group dynamics and individual difference.

Psychology in physical education and sport is not simply an academic subject at the training colleges, it is practiced by coaches and athletes in the field-setting. Psychological intervention, coping strategies, mental skills such as imagining, concentrating, focusing etc, team-interaction and cohesion are all

practical tasks in which athletes, teachers/coaches, and sport psychologists play reciprocally.

## ANXIETY

In the game of Judo anxiety plays a major role in best performance for the best performance the level of anxiety must be optimum. Judo being a combative game, it involves dangers of physical injury. So state situation anxiety has higher level when a Judokas enters the ring, the level of state anxiety should be reduced with passing time for the best performance.

According to Frost, anxiety is "an uneasiness and feeling of foreboding often found when a persons is about to embark on a hazardous venture; it is often accompanied by a strong desire to excel."

Trait Anxiety is defined as the relatively, "Stable individual differences in anxiety proneness i.e., tendency to respond to situations perceived with threatening with elevations." Trait anxiety influence performances in the individuals with high trait anxiety will attend more to information related to state anxiety.

## AGGRESSION

Any form of behaviour directed towards the goal of harming or injuring another living being who is motivated to avoid such treatment(Baron, 1977). In combative games aggression is the most needed requirement. The level of aggression should be optimum for the best performance. There are two forms of aggression in sports i.e. instrumental aggression and reactive aggression. Here is lack of unity in theory of 'aggression'. Optimum aggression refers to that magnitude of aggression that leads only to achieve the destination of victory. It does into lead to misway the main target.

**STATEMENT OF THE PROBLEM**

“Study of Physical Fitness and Psychological Variables of Judoka's at different Levels of Participation”

**OBJECTIVES OF THE STUDY**

1. To determine the difference in anxiety of Judokas between district and state level.
2. To determine the differences in anxiety of Judokas between district and National level.
3. To determine the differences in anxiety of Judokas between State and National level.
4. To determine the differences in aggression between Judokas of District and State level.
5. To determine the differences in aggression between District and National level.
6. To determine the differences in aggression between State and National level.
7. To determine the differences in strength between Judokas of District and State level
8. To determine the differences in strength between District and National level.
9. To determine the differences in strength between State and National level.
10. To determine the differences in speed between Judokas of District and State level.
11. To determine the differences in speed between District and National level.
12. To determine the differences in speed between State and National level.
13. To determine the differences in endurance between Judokas of District and State level.
14. To determine the differences in endurance between District and National level.
15. To determine the differences in endurance between State and National level.
16. To determine the differences in flexibility between Judokas of District and State level.
17. To determine the differences in flexibility between District and National level.
18. To determine the differences in flexibility between State and National level.

19. To determine the differences in agility between Judokas of District and State level.
20. To determine the differences in agility between District and National level.
21. To determine the differences in agility between State and National level.

**HYPOTHESES OF THE STUDY**

The following specific hypotheses were formulated on the basis of objected stated below:

1. There may exist a significant difference in anxiety of Judokas between district and State level.
2. There may exist a significant difference in anxiety of Judokas between district and National level.
3. There may exist a significant difference in anxiety of Judokas s between State and National level.
4. There may exist a significant Difference in aggression of Judokas between district and state level.
5. There may exist a significant difference in aggression of Judokas S between district, and National level.
6. There may exist a significant difference it aggression of Judokas participating as State and National level.
7. There may exist a significant difference in strength of Judokas between district and state level.
8. There may exist a significant difference in strength of Judokas between district and National level.
9. There may exist a significant difference in strength of Judokas between State and National level.
10. There may exist a significant difference in speed of Judokas between district and state .level.
11. There may exist a significant difference in speed, of Judokas between district and National Level.

12. There may exist a significant difference in speed of Judokas between State and National level.
13. There may exist a significant difference in Endurance of Judokas between district and state level.
14. There may exist a significant difference in Endurance of Judokas between district and National level.
15. There may exist a significant difference in Endurance of Judokas between State and National level.
16. There may exist a significant difference in Flexibility of Judokas between district and state level.
17. There may exist a significant difference in Flexibility of Judokas between district and National level.
18. There may exist a significant difference in Flexibility of Judokas between State and National level.
19. There may exist a significant difference In Agility" of Judokas between district and state level.
20. There may exist a significant difference In Agility of Judokas between district and National level.
21. There may exist a significant difference In Agility of Judokas between State and National level.

### **DELIMITATION OF THE STUDY**

The present factor delimiting the study are as follows:

1. The present study was delimited to male Judokas of Haryana only.
2. The sample consists of 300 district, state and National level Judokas only.
3. The geographic conditions as may be effective for different regions of Haryana may be considered as limited the study.
4. The physical fitness components viz. speed, strength, flexibility, agility, endurance were measured through physical fitness tests.

5. The anxiety and aggression of the Judokas was, assessed through questionnaire.

### **SIGNIFICANCE OF THE STUDY**

1. The result of the study would provide the criteria or the selection of talented players.
2. The study will help the coaches and teachers to solve the Psychological problems of female players.

### **DESIGN OF THE STUDY**

For this chapter, the investigator decided to adopt the survey methods to collect data related to Judo players. To compare the subjects the following variables have been selected for the study keeping in view of this significance in relation to their performance.

#### **Physical Fitness Variables**

Strength

Speed

Endurance

Flexibility

Agility

#### **Psychological Variables**

Anxiety

Aggression

### **SAMPLE OF THE STUDY**

To undertake this present study, total 300 Judokas were selected as subject as different levels of participation. The level of participation of the Judokas were District (100), State (100) and National(100). The age group of the Judokas was 17 to 25 years. As I observe that every Judokas from each level was not fit for sampling and good result. So for the reliable result stratified sampling was adopted to collect the conventional sampling.

The players were contacted in (i) Training Centres, (ii) Coaching camps, (iii) Competitions. The data collected by investigator from the various places:

- (i) Chaudhary Devi Lal University, Sirsa, (Inter collegiate Camp)

- (ii) Sport Authority of India Hostel, Bhiwani.
- (iii) Coaching Centres, Bhiwani.
- (iv) Haryana State Championship.
- (v) National Camp.

## TOOLS USED

The followings tools were used to collect the data for the present study:

### A. For Measuring Physical Fitness

- Standing Broad Jump Test (S.B.J.T.) was used for measuring Strength.
- 100 mt. Run Test was used for Speed.
- 12-Minute Run Walk Test (12 Min. R.W.) was used for measuring Endurance.
- Sit And Reach Test (S.R.T.) was used for measuring flexibility.
- Zig-Zag Run Test (Z-Z-Run) was used for measuring agility.

### B. For Measuring Psychological Variables

- Anxiety (Sports Competition Anxiety Test-SCAT)
- Aggression (Aggression Questionnaire-PATI, 1976)

## COLLECTION OF DATA

To collect the requisite data, the necessary test were administrated or the chosen variables. All the tests were administered at district, state and national level tournaments.

Prior to the administration of tests the subjects were given a chance to practice the prescribed tests so as to make them familiar with the test and know exactly what was to be done. An assistant was also trained who was well-versed with the chosen variables. He accompanied the investigator to all places in connection with collection of data. Standardized tests were used to collect the data i.e.

### A. For Measuring Physical Fitness

- Standing Broad Jump Test (S.B.J.T.) was used for measuring Strength.
- 100 mt. Run Test was used for Speed.

- 12-Minute Run Walk Test (12 Min. R.W.) was used for measuring Endurance.
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### B. For Measuring Psychological Variables

- Anxiety (Sports Competition Anxiety Test-SCAT)
- Aggression (Aggression Questionnaire-PATI, 1976)

Necessary instructions and demonstration were given to the subjects before the conduct of the test.

## STATISTICAL TECHNIQUE USED

In order to achieve the objectives of the present study, the investigator has applied statistical (t) test for different group comparison.

The collected data were tabulated and statistically analyzed. Mean, Standard Deviation, Difference between means, Standard Error of Deviation and 't' ratio were used as a statistical technique for its interpretation of data.

To compare psychological measurements of Judokas 't' test was used as devised by Garrett (1981) i.e.

$$\text{Mean} = \frac{\sum x}{N}$$

$$\text{Standard Deviation} = \sqrt{\frac{\sum x^2}{N} - \left(\frac{\sum x}{N}\right)^2}$$

$$t = \frac{\bar{M}_1 - \bar{M}_2}{\text{SED}}$$

where

$\bar{M}_1$  = Mean of first Group

$\bar{M}_2$  = Mean of second Group

SED = Standard Error of the deviation Where  
 $\text{SED} = \frac{\text{SD}}{\sqrt{N}}$

Where

SD1 = Standard Deviation of first group

SD2 = Standard Deviation of Second group

N1 and N2 = Total number of sub of first and second group.

The statistical parameters and test computed by using electronic computer. The computer programmer

first developed Tested and verified and then applied to the present data. The 't' test values were however computed with the help of the electronic calculator.

## CONCLUSION

1. State level Judokas are better in strength than district level.
2. National level Judokas are better in strength than state level.
3. National level Judokas have shown better performance in strength than district level Judokas.
4. The difference in Speed at State level and district level is insignificant.
5. National level Judokas are better in speed than state level.
6. National level Judokas have shown better performance in speed than district level Judokas.
7. State level Judokas are better in Endurance than district level.
8. National level Judokas are better in Endurance than state level.
9. National level Judokas have shown better performance in Endurance than district level Judokas.
10. State level Judokas are better in Flexibility than district level.
11. National level Judokas are better in Flexibility than state level.
12. National level Judokas have shown better performance in Flexibility than district level Judokas.
13. State level Judokas are better in agility than district level.
14. National level Judokas are better in agility than state level.
15. National level Judokas have shown better performance in agility than district level Judokas.
16. State level Judokas have less anxiety than district level.

17. National level Judokas have shown less anxiety than state level.
18. National level Judokas are better in anxiety than district level Judokas.
19. State level Judokas are better in aggression than district level.
20. National level Judokas are better in aggression than state level.
21. National level Judokas have shown better performance in aggression than district level Judokas.

## SUGGESTIONS FOR FURTHER STUDY

Keeping in view the findings of the study the following suggestions for the further study are being put forward:

1. It suggests that similar study may be conducted on the female Judokas and also on the players related to other combative games.
2. It is suggested that more variables of psychology and physical fitness may be taken and used.
3. There is a need for collection of large number of population for studies using other statistical methods to determine if different methods would reveals significantly different results.

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