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## Comparative validation of judoka in northern region of India

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### Abstract

The primary aim of this research was to determine the difference of balance among Punjab and Haryana Judoka of northern region of India. For the purpose of the present study, One Hundred Sixty (N=160) subjects between the age group of 19-28 years were selected. The subjects were purposively assigned into two groups: Group-A: Punjab Judoka (N<sub>1</sub>=80) and Group-B: Haryana Judoka (N<sub>2</sub>=80). This is an exploratory study that has employed method of data collection and analysis quantitatively. The Statistical Package for the Social Sciences (SPSS) version 14.0 was used for all analyses. The differences in the mean of each group for selected variable were tested for the significance of difference by t-test. In all the analyses, the 5% critical level ( $p < 0.05$ ) was considered to indicate statistical significance. The descriptive statistics shows the Mean and SD values of Punjab judoka on the sub-variable Balance as 26.70 and 6.03 respectively. However, Haryana judoka had Mean and SD values as 29.00 and 7.06 respectively. The Mean Difference and Standard Error Difference of Mean were 2.30 and 1.03 respectively. The 't'-value 2.214 as shown in the table above was found statistically significant ( $P < .05$ ). But while comparing the mean values of both the groups, it has been observed that Haryana judoka have demonstrated better Balance than the Punjab judoka.

**Keywords:** Comparative validation, judoka, SPSS

### Introduction

Judo was originally created in 1882 by Jigoro Kano as a physical, mental, and moral pedagogy in Japan. It is generally categorized as a modern martial art, which later evolved into a combat and Olympic sport. Its most prominent feature is its competitive element, where the objective is to either throw or take down an opponent to the ground, immobilize or otherwise subdue an opponent with a pin, or force an opponent to submit with a joint lock or a choke. Strikes and thrusts by hands and feet as well as weapons defenses are a part of judo, but only in pre-arranged forms and are not allowed in judo competition or free practice. A judo practitioner is called a judoka. The primary aim of this research was to determine the difference of balance among Punjab and Haryana Judoka of northern region of India.

### Material and Methods

#### Selection of Subjects

For the purpose of the present study, One Hundred Sixty (N=160) subjects between the age group of 19-28 years were selected. The subjects were purposively assigned into two groups: Group-A: Punjab Judoka (N<sub>1</sub>=80) and Group-B: Haryana Judoka (N<sub>2</sub>=80). All the subjects were informed about the objective and protocol of the study.

### Procedure

#### Balance

##### (Stork Balance Stand Test)

- **Purpose:** To assess the ability to balance on the ball of the foot.
- **Equipment required:** Flat, non-slip surface, stopwatch, paper and pencil.
- **Procedure:** Remove the shoes and place the hands on the hips, then position the non-supporting foot against the inside knee of the supporting leg. The subject is given one minute to practice the balance. The subject raises the heel to balance on the ball of the

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Foot. The stopwatch is started as the heel is raised from the floor. The stopwatch is stopped if any of the follow occurs:

- The hand (s) come off the hips.
- The supporting foot swivels or moves (hops) in any direction.
- The non-supporting foot loses contact with the knee.
- The heel of the supporting foot touches the floor.

**Scoring:** The total time in seconds is recorded. The score is the best of three attempts

### Design of the study

This is an exploratory study that has employed method of data collection and analysis quantitatively. The purposive sampling technique was used to attain the objectives of the study.

### Statistical analysis

The Statistical Package for the Social Sciences (SPSS) version 14.0 was used for all analyses. The differences in the mean of each group for selected variable were tested for the significance of difference by t-test. In all the analyses, the 5% critical level ( $p < 0.05$ ) was considered to indicate statistical significance.

### Results

**Table 1:** Mean Values ( $\pm$ SD), Standard Error of the Mean and Test Statistic t of Balance in Punjab Judoka (N = 80) and Haryana Judoka (N = 80).

	Punjab Judoka	Haryana Judoka
Sample size	80	80
Arithmetic mean	26.70	29.00
95% CI for the mean	25.35 to 28.04	27.42 to 30.57
Variance	36.36	49.97
Standard deviation	6.03	7.06
Standard error of the mean	0.67	0.79
Difference	2.30	
Standard Error	1.03	
95% CI of difference	0.24 to 4.35	
Test statistic t	2.214	
Degrees of Freedom (DF)	158	
Two-tailed probability	$P < 0.028$	

\*Significant at 0.05 level

Table-1 presents the results of Punjab judoka and Haryana judoka with regard to the variable Balance. The descriptive statistics shows the Mean and SD values of Punjab judoka on the sub-variable Balance as 26.70 and 6.03 respectively. However, Haryana judoka had Mean and SD values as 29.00 and 7.06 respectively. The Mean Difference and Standard Error Difference of Mean were 2.30 and 1.03 respectively. The 't'-value 2.214 as shown in the table above was found statistically significant ( $P < .05$ ). But while comparing the mean values of both the groups, it has been observed that Haryana judoka have demonstrated better Balance than the Punjab judoka.

### Conclusion

While concluding the mean values of both the groups, it has been observed that Haryana judoka have demonstrated better Balance than the Punjab judoka.

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