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## Comparison of balance ability between rural and urban intervarsity level judokas of Madhya Pradesh

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### Abstract

The purpose of this study was purposive selected from the one hundred twenty (N=120) subject was selected i.e. (60 rural and 60 urban) from the six weight categories (60 kg, 66 kg, 73 kg, 81 kg 90 kg and +90 kg.) from intervarsity level judokas. Age ranged between 18 to 28 years is presented and 10 subjects from each weight category by using Balance Ability Static and dynamic balance ability related to biomechanical variables for the research purpose, Descriptive statistics and independent t test were applied for SPSS-21 software and the following findings were drawn:

**Objectives of the study:** The first objective of this study to characterize the Balance ability (Static and Dynamic) between rural and urban intervarsity level judokas for the deferent weight categories of Madhya Pradesh. To compare the Balance ability (Static and Dynamic) between rural and urban areas for the different weight category judokas of intervarsity level of Madhya Pradesh. Statistical Analysis: According to objectives of the study to gathering the data Analysis of descriptive statistics were used. (Mean Standard Deviation), Independent t- test was applied was applied for SPSS-21 software to analyze and compare of rural and urban areas of intervarsity level judokas of Madhya Pradesh among the various weight category of judokas.

**Conclusions According to objectives of the study the following conclusions were drawn:** The there was no significance Mean score of balance ability (static and dynamic) for the different weight category (60 kg, 66 kg, 73 kg, 81 kg and +90 kg.) of intervarsity level judokas, Rural and Urban areas of Madhya Pradesh. The there was no significance tabulated t value between rural and urban areas of balance ability (static and dynamic) for the different weight category (60 kg, 66 kg, 73 kg, 81 kg and +90 kg.) of intervarsity level judokas, Rural and Urban areas of Madhya Pradesh. significant was set at 0.05.

**Keywords:** Rural and urban, level judokas

### Introduction

The takenouchi-ryu martial art system founded in 1532 is considered the beginning of Japan's Jujitsu forms. Judo was derived from Jujitsu, the art for either attacking others or defending oneself with nothing but one's own body.

**The Kodokan Judo:** In 1882, Dr. Jigoro Kano (The Father of Judo) made a comprehensive study of the ancient self-defence forms and integrated the best of these forms into a sport which is known as Kodokan Judo.

The term Kodokan breaks down into ko (lecture, study, method), do (way or path), and kan (hall or place). Thus it means "a place to study the way". Similarly judo breaks down into ju (gentle) and do (way or path) or "the gentle way".

Prof. Kano adopted the superlative parts of all the Jujitsu schools, got rid of precarious parts and the Kodokan Judo was recognized in a few years to be excellent since its students overwhelmed the Jujitsu athletes at the Police Bujitsu Contest.

The categorization of Kodokan Judo was completed about 1887. The Kodokan had three broad aims: physical education, contest proficiency and mental training.

**The Founder of Judo Master Jigoro Kano The Olympic Sport:** Proceeding with the organization of the Kodokan and enacting the regulations of Judo, Prof. Kano became the first Asian member of the International Olympic Committee in 1909 and worked for the spread of Judo world-wide.

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Judo became an official event in the Olympic Games of Tokyo in 1964, backed by Judo fans and sport promoters all over the world.

Similarly, to other martial arts, Judo is sub-divided into weight categories as well as being differentiated by gender and grade. Each gender is divided into seven weight categories, with men's weight categories starting at under 60 kg then 60 – 66, 66 – 73, 73 – 81, 81 – 90, 90 – 100 and over 100 kg. Women's weight categories are under 48 kg, 48 – 52, 52 – 57, 57 – 63, 63 – 70, 70 – 78 and over 78 kg.

This grading system allows the competitors to be more equally matched at the events. The Judo grading system incorporates nine different color belts, starting with white color, then red, yellow, orange, green, blue, brown, black and red/white striped. The red/white striped belt denotes a grade of the sixth Dan or higher. Competitive Judo is divided into two categories, blue belt lower and brown belt or higher. It is rare for competitive events not to be organized this way. To attain Dan grade in Judo, Judoka must be at least 15 years old. To progress to a second Dan grade judoka must be minimum age of 20 years old.

BALANCE in biomechanics, balance is an ability to maintain the line of gravity (vertical line from center of mass) of a body within the base of support with minimal postural sway. Sway is the horizontal movement of the center of gravity even when a person is standing still.

Static balancing refers to the ability of a stationary object to its balance. The occurs when a parts center of gravity is on the axis of rotation. However, the dynamic balance definition is the ability of an object to balance whilst in motion or when switching between positions.

Dynamic Balance - (aeronautics) the state of equilibrium in which centrifugal forces due to a rotating mass (e.g., a propeller) do not produce force in the shaft and so vibration is reduced.

**Objectives of the study**

1. The first objective of this study to characterize the Balance ability (Static and Dynamic) between rural and urban intervarsity level judokas for the deferent weight categories of. Madhya Pradesh.
2. To compare the Balance ability (Static and Dynamic) between rural and urban areas for the different weight category judokas of intervarsity level of Madhya Pradesh.

**Methodology**

one hundred twenty (N=120) subject was selected i.e. (60 rural and 60 urban) from the six weight categories (60 kg, 66 kg, 73 kg, 81 kg 90 kg and +90 kg.) from intervarsity level judokas. Age ranged between 18 to 28 years is presented and 10 subjects from each weight category by using Balance Ability Static and dynamic balance ability related to biomechanical variables for the research purpose, Descriptive statistics and independent t test were applied for SPSS-21 software and the following findings were drawn:

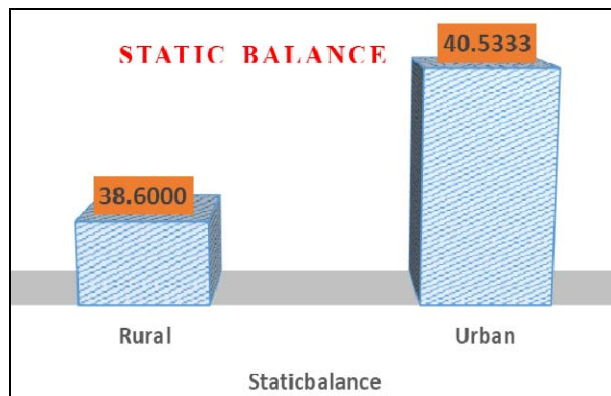
**Statistical Analysis**

- According to objectives of the study to gathering the data Analysis of descriptive statistics were used. (Mean Standard Deviation)
- Independent t- test was applied was applied for SPSS-21 software to analyze and compare of rural and urban areas of intervarsity level judokas of Madhya Pradesh among the various weight category of judokas. significant was set at 0.05

**Findings and Results of the Study Table 1  
Descriptive statistics tables**

**Table 1:** Mean and Standard Deviation Values of Balance ability of static balance of elite judokas of Intersarsity level

Groups	N	Mean	Std. Deviation	Std. Error Mean	
Static Balance	Rural	60	38.6000	3.98812	.51486
	Urban	60	40.5333	3.18080	.41064



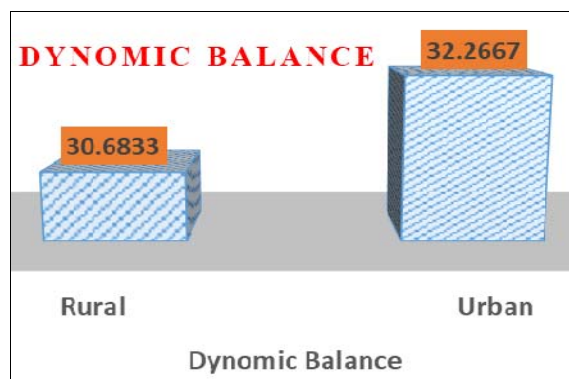
**Fig 1:** Graphical Representation of mean and standard deviation with regard to static balance ability of elite judokas of intervarsity level.

Table 1 Shows balance ability (Dynamic balance) of different weight category (60 kg, 66 kg, 73 kg, 81 kg 90 kg and +90 kg.) from intervarsity level judokas, Madhya Pradesh. with the help of descriptive statistics (Mean and standard deviation) of rural and urban areas for this study. balance ability (static balance) were 30.6833±5.50344, 32.2667±4.89506.

**Table 2:** Mean and Standard Deviation Values of Balance ability of Dynamic balance ability of elite judokas of Intersarsity level

Groups	N	Mean	Std. Deviation	Std. Error Mean	
Dynamic Balance	Rural	60	30.6833	5.50344	.71049
	Urban	60	32.2667	4.89506	.63195

Table 2 shows balance ability (Dynamic balance) of different weight category (60 kg, 66 kg, 73 kg, 81 kg 90 kg and +90 kg.) from intervarsity level judokas, Madhya Pradesh. With the help of descriptive statistics (Mean and standard deviation) of rural and urban areas for this study. balance ability (static balance) were 30.6833±5.50344, 32.2667±4.89506.



**Fig 2:** Graphical Representation of mean and standard deviation with regard to Dynamic balance ability of elite judokas of intervarsity level.

## Independent t test

**Table 3:** Independent t-test for the data of Balance ability and physiological variables of deferent weight category of male elite intervarsity level judokas

Static Balance Ability						
S.N.	Groups	M	Md	Sed	Calculated T-Ratio	Tabulated-T-Ratio
1	Rural Male judokas	38.6000	-1.93333	.65857	-2.936	1.984
2	Urban male Judokas	40.5333				

\*Significant at 0.05 level (120,) = 1.984)

Table 3 reveal that the calculated t- value (-2.936) was more than the tabulated t-value (1.984), so there was insignificant difference between the mean scores of Comparative Balance ability in Static balance ability between the deferent weight category like 60 kg, 66 kg, 73 kg 81kg, 90 kg, and +90 kg

rural and urban elite male intervarsity level judokas. Total one hundred twenty (N=120). Sixty (60) rural areas and sixty (60) urban areas both group for the equal subjects which has determined that impact of different weight categories of static balance ability of intervarsity level of elite judokas.

**Table 4:** Independent t-test for the data of Dynamic Balance ability of deferent weight category of male elite intervarsity level judokas

Dynamic Balance Ability						
S.N.	Groups	M	MD	Sed	Calculated T-Ratio	Tabulated-T-Ratio
1	Rural Male Judokas	30.6833	-1.58333	.95087	-1.665	1.984
2	Urban Male Judokas	32.2667				

Table 4 reveal that the calculated t- value (-1.665) was less than the tabulated t-value (1.984), so there was no significant difference between the mean scores of Comparative Balance ability in Dynamic balance ability between the deferent weight category like 60 kg, 66 kg, 73 kg 81kg, 90 kg, and +90 kg rural and urban elite male intervarsity level judokas. Total one hundred twenty (N=120). Sixty (60) rural areas and sixty (60) urban areas both group for the equal subjects which has determined that impact of different weight categories of dynamic balance ability of intervarsity level of elite judokas.

## Findings

It was found to have a no significant difference between rural and urban areas of intervarsity level of judokas of Madhya Pradesh The reason of these differences can be associated with above results this is probably due to the different nature of the physical components training and pre-requisite for students. Number of participation and level of participation. The reason may be attributed that the physically trained student or level of achievements and taken deferent types nutrition food. These results may be due to a small sample of size and other factors such as different types of body, differences in body composition. These results may be nutrition diet schedule deference. The reason may be psychological variables stress, anxiety, aggression, fear, motivation confidence, attention concentration etc. the six weight categories (60 kg, 66 kg, 73 kg, 81 kg 90 kg and +90 kg.) from intervarsity level judokas. Age ranged between 18 to 28 years is presented in this chapter. The data on balance ability like (Static Balance and Dynamic Balance) intervarsity level judokas, Madhya Pradesh.

## Conclusions

**According to objectives of the study the following conclusions were drawn:** There was insignificance Mean score of balance ability (static and dynamic) for the different weight category (60 kg, 66 kg, 73 kg, 81 kg and +90 kg.) of intervarsity level judokas, Rural and Urban areas of Madhya Pradesh. There was no significance tabulated t value between rural and urban areas of balance ability (static and dynamic) for the different weight category (60 kg, 66 kg, 73 kg, 81 kg and +90 kg.) of intervarsity level judokas, Rural and Urban areas of Madhya Pradesh.

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