

COMPARATIVE STUDY OF EXPLOSIVE STRENGTH AND FLEXIBILITY BETWEEN JUDO AND BOXING MALE PLAYERS

Naorem Sonson Singh

Research Scholar, Department of Physical Education and Sports Science,
Dhanamanjuri University, Imphal, Manipur, India

Khumanthem Rajen Singh

Professor, Department of Physical Education and Sports Science,
Dhanamanjuri University, Imphal, Manipur, India

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Abstract

Purpose: The study aims to compare explosive strength and flexibility between judo and boxing male players.

Method: A total of 30 male subjects, fifteen each from judo and boxing male players of Manipur, were randomly selected within the age range between 18 to 25 years. The players participated in at least state-level and above tournaments. The test administration was selected, such as the Sargent vertical jump for explosive strength and the sit and reach test for flexibility. The pertaining data on explosive strength and flexibility were expressed in units of centimetres and inches. The statistical techniques used for the data analysis were descriptive and independent 't' tests. The level of significance was set at 0.05.

Result: The outcome explored that there were significant differences in explosive strength and flexibility between judo and boxing male players as the value 't' = 2.35 and 't' = 3.74 correspondingly.

Conclusion: The judgments signify in both explosive strength and flexibility between the judo and boxing male players of Manipur.

Keywords: Explosive Strength, Flexibility, Judo, Boxing

Introduction

Judo and boxing are combat sports, but their playing style and nature are very different. Both games demand high physical fitness efficiency. Physical fitness is an essential component of everyday life. It is a state of well-being in everyday life that comprises skill and health-related components. The components of physical fitness are balance, coordination, agility, speed, power, and reaction time. Physical fitness is the degree of capacity of an individual to do a physical work task under various ambient conditions (Basak & Dutta, 2016). Boxing and judo players demand good physical fitness efficiency for better performance.

Explosive strength and flexibility are the most important fitness components for players' forceful and free body movement. Efficient muscle strength and more flexibility play a role in improving the players' performance. Maximal muscle strength is a peak strength value under static conditions (Laskowski & Suchanowski, 2009). Muscular strength is the force produced by a muscle or group of muscles that can exert force against a resistant body in one maximum effort (Mathews, 1973). Flexibility means the maximal passive physiological range of motion in a given joint movement of the body (Jayasudha *et al.*, 2019;

Kumar, 2013). The more flexible the muscle, the more the range of motion in different body parts and the less chance of injury during the game are studied (McArdle *et al.*, 1994). Flexibility depends on muscle viscosity, ample warm-up, dispensability of the joint capsule, and compliance tissues like ligaments and tendons that affect the range of motion (David, 1989).

Objective

The objectives of the study were

- i. To study the significant differences in explosive strength between judo and boxing male players.
- ii. To study the significant differences in flexibility between judo and boxing male players.

Method

In the study, 30 male subjects, fifteen each from judo and boxing male players, were randomly selected ranging the age between 18 to 25 years of Manipur. The players were participated in at least state-level and above tournaments from reputed clubs of Manipur. The test administration was selected, such as the Sargent vertical jump for explosive strength and the sit and reach test for flexibility which was expressed in units of centimetres and inches respectively. The statistical techniques used for the data analysis were descriptive (mean (M) and standard deviation (SD)) and independent ‘t’ tests. The level of significance was set at 0.05.

Results

Table 1 and Figure 1 showed the outcome of the study between judo and boxing male players on explosive strength and flexibility which is important fitness constituents for players' dynamic and free body movement.

Table 1: Comparison of explosive strength and flexibility between judo and boxing male players

Variables	Groups	N	M	SD	t-value	Sig. p-value
Explosive Strength	Judo	15	50.80	4.07	2.35	0.03
	Boxing		54.20	3.84		
Flexibility	Judo	15	43.13	3.20	3.74	0.00
	Boxing		39.40	2.16		

Significant at 0.05, where tabulated $t_{(0.05)}(28) = 2.048$

The analysis of the explosive strength highlighted that mean and standard deviation of judo and boxing male players were 50.80 ± 4.07 and 54.20 ± 3.84 respectively. There were significant differences in explosive strength between judo and boxing players as the calculated value ‘t’ = 2.35 is greater than the tabulated value ‘t’ = 2.048 at 0.05 level of confidence.

For flexibility, mean and standard deviation of judo and boxing male players were 43.13 ± 3.20 and 39.40 ± 2.16 respectively. Significant differences in flexibility were found between judo and boxing players as the calculated value ‘t’ = 3.74 is greater than tabulated ‘t’=2.048 at 0.05 level of confidence.

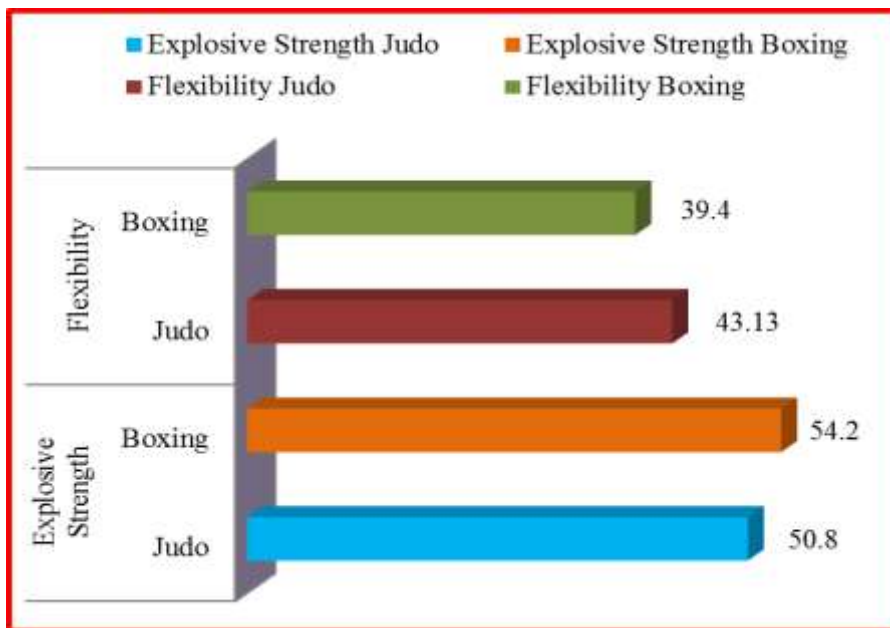


Figure 1: Showing bar diagram of explosive strength and flexibility between judo and boxing male players

Discussion

The study reveals that the results of the independent ‘t’ test showed significant differences in explosive strength between judo and boxing male players. The mean values of boxing players are higher than those of judo players in the case of explosive strength. The results might be due to boxing players’ having a lot of punch action and multiple footstep actions depending on strength and endurance. The Boxers showed a better capability in strength, while the judokas were better in endurance with greater flexibility (Anilkumar, 2013). Boxing male players have more strength as compared to the judo male players (Dhillon, 2018).

In the case of flexibility, significant differences are found between the judo and boxing players. Judo players' mean values are higher than boxing players in terms of flexibility. The results might be due to the performance of the judo players in attack, defence, and counterattack, which are very important. In throwing techniques of standing position, the flexibility of the shoulder region is required to interfere with the opponent’s balance and to reach the opponent’s leg, which should be hooked, blocked, or swept, for which hip flexibility is most responsible (Sertic *et al.*, 2009). The boxer players showed better capability in speed, agility, and power, while the judokas had greater flexibility (Anilkumar, 2013).

Conclusions

The findings showed significant differences in explosive strength between the judo and boxing players which can be concluded that male boxing players have better performance of explosive strength than male judo players.

Furthermore, there are significant differences in flexibility between the judo and boxing players that highlight male judo male players are more flexible than compared to male boxing players.

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