

A Study on Sport of Wrestling & Judo Strength and Agility

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Abstract – The aim of this study was to evaluate the intensity & endurance of male wrestlers & judokas. Data were collected on a total of 40 (Wrestlers – 20 & Judokas – 20) junior & senior national level male players. To assess the intensity and stamina of chosen subjects, the Medicine Ball & Illinois Agility Test were used. Standard deviation and unpaired t – test were used with the aid of the SPSS statistical software to equate intensity & endurance of wrestlers and judokas mean. The significance amount was set at 0.05 percent to assess the hypothesis. The result indicates that there was a major gap in the intensity and stamina of the wrestling & judo male teams.

Key Words – Judoka, Wrestling, Strength, Agility

INTRODUCTION

Wrestling & Judo are two distinct styles of fighting sports. The biggest distinction between the two lies in their combat tactics & strategies. Wrestling and Judo are also fighting games requiring martial arts. While they are pretty much the same, there are a few variations in the two types of competition. Judo is a type of fighting and western martial art. In 1882, Jigoro Kano developed this kind of sport in Japan. It's an Olympic activity.

It is a competitive sport in which the goal is to throw or carry the opponent to the ground, to immobilise or subdue the opponent with a trap, or to compel the opponent to surrender with a joint lock or a choke. Strikes and strokes of hands & feet are part of judo. Defense weapons are utilized in pre-arranged ways, known as "kata," but they are not authorised in judo competition or free practise. The Judo Exercise is called the Judoka. Judo is an art style of fighting focused on techniques. There are 3 main types of techniques available:

- Throwing techniques
- Grappling techniques
- Striking techniques

Judo is primarily popular for punching and wrestling exercises. Every technique has three separate phases. The phases involved are: the initial equilibrium split, the action of turning & fitting into the bind, the implementation & completion of the connexion. In order to get these methods correct, Judo practitioners dedicate a part of their practise

session so that they can be performed without a substantial chance of injury.

Judo, as a sporting division of the Olympics, is expected to conform with a series of laws. Penalties shall be levied on the usage of banned methods which shall be waived if the applicant is outside the specified region.

Judo is a hierarchical and conservative style of painting. In several nations, it is taught as a craft. The instructor in judo is named sensei. Traditionally, Judo practitioners sport white uniforms called keikogi; it is a standard kimono fastened by a coloured belt.

Wrestling is a type of battle sport that includes grip action, tossing, joint locks, and taking down. It requires a form of grappling strategy for combat. It is a physical rivalry between two or more rivals who are battling each other in an effort to achieve and retain a dominant advantage over the other.

Wrestling has a multitude of forms, with different rules, in both conventional and new types. The methods used in this sport have been introduced into both martial arts and military hand-to-hand fighting schemes.

Wrestling is one of the oldest styles of battle. Its history dates back to 15,000 year old cave paintings from Egypt, Babylon & France. Over the years, the success of wrestling has evolved and now has its own foreign division at the Olympic Games for all ages. Wrestling fields are classified into two groups:

- International wrestling disciplines

- Folk wrestling disciplines

World sports disciplines are for males & females. This style of wrestling contains the strategies of attack, protection and grappling. Depending on the weight and height of the competitors, wrestling takes place in various divisions. The key goal is to force the opponent to the field, to drive them out of reach or to lock their head to the ground. Wrestlers wear spandex or athletic shorts during a war, which allows them switch rapidly.

Folk wrestling is a cultural style of wrestling that is unique to the society or regional area of the country. It has no laws whatsoever. Some examples of folk-style wrestling are pehlwani from India, penjang gulat from Indonesia, schwingen from Switzerland, tigel from Ethiopia, shuai jiao from China, and ssireum from Korea.

In wrestling, MMA is a style of combat grappling that integrates martial art techniques into its framework. Battle wrestling is a practical method of self-defense that includes all elements of standing & ground combat, making it ideal and secure to use for military, police & security training.

Comparison between Wrestling and Judo:

| | Wrestling | Judo |
|------------|---|--|
| Definition | Wrestling is a combat sport form, which involves fighting, throwing and take downs. | Judo is a combat and a modern martial art form of sport. |
| Form | It is a form of combat sport. | It is a form of martial arts. |
| Objective | The objective is to gain and maintain a superior position over other. | The objective is to throw or pin the person to the ground. |
| Dress | Spandex or shorts. | White uniform with belt. |
| Technique | It involves a grappling type of technique. | It involves throwing and grappling techniques. |
| Fighting | It focuses on throws, takedowns and groundwork. | It focuses on striking and kicking standing up. |

LITERATURE REVIEW

Paulo Martins et. al. (2018) This research investigates the interaction between motivating laws in the spectrum of self-determination and healing mechanisms in wrestlers. Such awareness will enable coaches to build and sustain a supportive environment, both in preparation and competition, making for improved outcomes and success. Findings suggest that both intrinsic & extrinsic motivations are linked to the mechanism of healing of the athlete, in specific personal & social characteristics. For eg, the innate motivation & correlation with personal & social well-being is $r = .60$, $p = .05$, and the transitional extrinsic motivation & professional approval is $r = .66$, $p = .05$. In this research , it is possible to further grasp the

emotional habits of the wrestlers and their interaction with the recovery method, which helps coaches to better control the emotions of athletic adherence & belonging generated within the squad in terms of their contribution to the recovery process.

Ozkan Isik et al. (2018) United World Wrestling (UWW) modified the laws of the Wrestling Sport prior to the 2016 Olympic Games. The goal of this analysis was to create a wrestling competition format focused on the new UWW competition rules for all age levels and types. 300 wrestling matches were witnessed and examined separately. We then defined the flaws, confusions and faults in the type and took a collective judgement on the variables. Finally, we have got an updated type. This type allows access to the new wrestling laws, which would make it simpler for analysts focusing on performance study wrestling, as well as allowing coaches and trainers to document their wrestlers' matches in tournaments and their rivals. As a consequence, wrestlers will use this method to determine where, where and how they applied the technique; on which side they applied the technique; so how many points they got. In addition, the method can allow them to receive definitive outcomes. So, the characteristics of the wrestlers can be registered in compliance with the current competition laws.

Fernanda Pese et. al. (2013). While judo is a sport with a great history that is performed worldwide, the state of the art and scientific developments have not yet been evaluated from a bibliometric point of view. The purpose of this article is the status of the science development, cooperation and effect of scientific papers on judo, and the most successful study groups working on this topic. Our review was based on records from the Scientific Citation Index and the Social Science Citation Index. Bibliometric research and networking is conducted using the Histcite and Bibexcel tools. As a consequence, 383 original articles and research reports were obtained from 162 publications in 78 Online Science @ groups. The Budo Archives had the largest number of publications (56), and the International Journal of Sports Medicine had the largest number of citations (192). More than half of the papers appeared in the context of sports science. The network of co-authors (threshold ≥ 3 articles) helped us to recognise 6 clusters of co-authors. The citation network consisted primarily of 14 contributors. While judo science is still at an early stage and has a lower visibility than other sports, its creation is of significant interest to many scientific fields & sports in general. Judo literature is primarily published in sports science & sports medicine papers, the most widely referenced ones. Co-authorship networks tended to be clustered, with a single lead author, whereas quotation networks between writers tended to be directed to other areas of study.

Shinji NAGAIRO et. al. (2014) The prevalent occurrence of sports-related brain injury, with ASDH, concussion, & chronic traumatic encephalopathy (CTE), is examined. Rotational acceleration is thought to be more probable to cause not just cortical concussion but also ASDH attributable to fracturing of the parasagittal bridging vein, depending on the extent of the rotational acceleration damage. Repeated sports brain activity raises the risk of future harm, face swelling, ASDH or CTE. It is important to consider the conditions for a successful return to play post-concussion (RTP) in order to prevent fatal complications or CTE arising from multiple concussions. If a concussion has been confirmed, the participant must not be able to conduct RTP on the same day and does not restart action before the concussion effects have been thoroughly healed. If brain injury has been reported if there is a subdural hematoma, the participant may not be permitted to compete in any contact activities. As much remains unclear about the pathogenesis & pathophysiology of sports-related concussion, ASDH, & CTE, specific and clinical research are needed to elucidate key issues in sports-related head injuries.

Surender Kumar et. al.. (2014) The aim of this research was to find a similarity of motor fitness between Judo & Wrestling female players in the Rohtak District. Wrestling is a fighting activity including wrestling strategies such as clinch punching, tossing and dragging, joint chains, pins and other wrestling bolts. A fighting but a direct competition with two (sometimes more) rivals or sparring partners who are attempting to achieve and retain a superior role. Wrestling is one of the oldest styles of battle. A description of the present thesis was performed on 60 male sportsmen, 30 of whom had engaged at the inter-university level. The age ranged from 18 to 25 years. Endurance – is the capacity to execute sport activities with the required consistency and pace during exhaustion conditions. Flexibility – Flexibility is a human being 's capacity to execute a broad spectrum of action. Further data from the engine fitness test was obtained by structured instruments Cooper 12 min run / walk test for (Endurance) and forward bent and reach test for (flexibility) and data was analysed by "t" device. Following a comparison of the present results, it was noticed that Judo's female Rohtak players had greater durability and stamina in grappling with female players.

Ji-Woong Noh et. al. (2015) This review explains the symptoms of accidents in strike and non-stricken fighting sports, and the findings are intended for use in sports physiotherapy studies. [Subjects and Methods] The research was performed on 159 participants participating in a wide spectrum of fighting sports. The participants featured professional collegiate athletes from the following sports: judo (47), ssireum (19), wrestling (13), kendo (30), boxing (16), and taekwondo (34). 133 of the participants were male & 26 were female.

In the case of ssireum & boxing, all the competitors were male. [Results] In the case of fighting sports, the forms of injuries and the places of injuries varied due to the style of play. Trike sports include attacking a competitor immediately by kicking or punching or by using a knife. Taekwondo, football, and kendo are also forms of strike games. The laws of taekwondo, or rather gyorugi, claim that an athlete can either score by punching his adversary in the chest with just his arms, or by pushing his opponent's head and body with only a portion of his foot under his ankle. Dislocation and fractures to the spine, back, and elbows were more common in non-striking activities, although accidents to the wrists and hands were more prevalent in strike activities. There was a strong rate of sprains, strains, fractures, and lower limb accidents in all categories. [Conclusion] We conclude that the symptoms of accidents in fighting sports vary by style of play, and thus our analysis can provide physical therapists and clinicians with knowledge that can be utilised to avoid injury.

Emerson Franchini et. al. (2013) The perception of time-motion and physiological responses to judo fighting is essential to the organisation of training. This study was focused on the search results using the following terms: "judo and rivalry," "judo and physiology," "judo and randori" and "judo and time-motion research," "judo and battle," "judo and battle" and "judo and biochemistry." The commitment-pause ratio during judo wars is between 2:1 and 3:1, with 20s and 30s of commitment and 10s of pauses. Judo battles thus depend on all three metabolisms, with the anaerobic alactic mechanism being responsible for short-term potent acts during technological applications, with the anaerobic lactic mechanism being responsible for sustaining high-intensity acts over longer times (e.g. grip disputes), while the aerobic system is responsible for the rehabilitation cycles throughout high-intensity act. Training treatment must take these demands into consideration, and a muscle-specific action examination can help to guide a reasonable approach to improving the performance of judo athletes. In general, the lower-body is engaged in short-term high-intensity acts during technical executions, whilst the upper-body muscle classes are active in both strength-endurance and control activities. Since several muscle groups conduct various activities during the match, strong cardiovascular demand is often observed in judo.

PROCEDURE AND METHODOLOGY

The present thesis was termed "Comparative Analysis of Strength & Agility between Wrestlers & Judokas." For the purpose of the research, a total of 40 (Wrestlers – 20 & Judokas – 20) junior & national level male Wrestlers and Judokas from Shiksha Bharti Vidya Niketan Kalayat, Haryana, were collected. To assess the intensity and stamina of chosen subjects, the Medicine Ball and the Illinois Agility Test were used. Standard deviation &

unpaired t – test were used with the aid of the SPSS statistical software to equate intensity and endurance of wrestlers and judokas mean. The significance amount was set at 0.05 percent to assess the hypothesis.

RESULT AND FINDING

Table 1: Comparison of mean & standard deviation of intensity between wrestlers & judokas

| Group | N | Mean | Standard Deviation | Standard Error of mean | t-value |
|-----------|----|------|--------------------|------------------------|---------|
| Judokas | 20 | 5.97 | 0.89 | 0.19 | 2.39* |
| Wrestlers | 20 | 6.67 | 0.96 | 0.21 | |

t_{df(38)} = 2.021

Table & Figure 1 Statistically, the mean & standard deviations for wrestlers were 5.97 & 0.89 while, as in the case of Judokas, they were 6.67 & 0.96 respectively. The estimated t-value (2.39) is higher than the tabulated t-value (2.021) at 0.05 stages. Thus, it means that there is a major gap in intensity between Wrestling and Judo Teams.

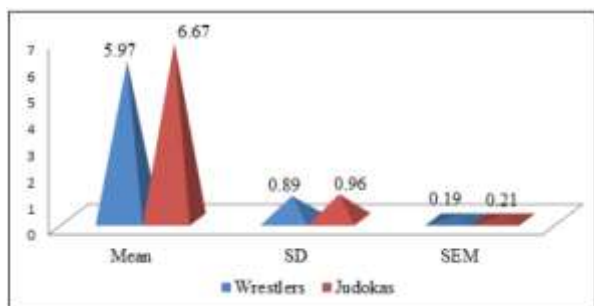


Fig 1: Comparison of mean & standard deviation of intensity amongst wrestlers & judokas

Table 2: Comparison of mean & standard difference of agility between wrestlers & judokas

| Group | N | Mean | Standard deviation | Standard Error of mean | t-value |
|-----------|----|-------|--------------------|------------------------|---------|
| Wrestlers | 20 | 10.84 | 1.20 | 0.21 | 2.61 |
| Judokas | 20 | 11.74 | 1.42 | 0.26 | |

t_{df(38)} = 2.021

Table & Figure 2 Statistically, the mean & standard deviations for wrestlers are 10.84 and 1.20 while, as in the case of Judokas, they are 11.74 & 1.42 respectively. The estimated t-value (2.61) is higher than the tabulated t-value (2.021). Thus, it means that there is a major variation in endurance between Wrestling & Judo Teams.

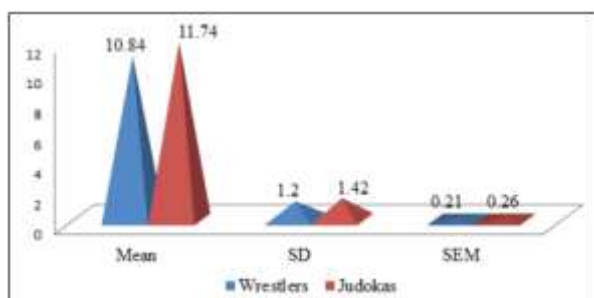


Fig 2: Comparison of mean & standard deviation of agility between wrestlers & judokas

CONCLUSION

Wrestling & Judo are also fighting games requiring martial arts. While they are pretty the same, there are a few variations in the two types of competition. Wrestling is a type of battle sport that includes grip action, tossing, joint locks, and taking down. Judo is a hierarchical and conservative style of painting. In several nations, it is taught as a craft. The instructor in judo is named sensei. The analysis showed that there was a substantial gap in intensity and stamina between the junior state and the national level male Wrestlers & Judokas. The findings indicate that, due to their power, there was a significant difference between junior state & national level male Wrestlers & Judokas; prove there was a significant difference between the endurance variable of junior state & national level male Wrestlers & Judokas.

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