



ROLE OF JUDOKA'S HEIGHT ON PERFORMANCE OF JUDO TECHNIQUES

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ABSTRACT

Judo is a compact game in which two players fight against each other according to the rules of play, following the ideal and gentle way of judo techniques. and control their opponent by speed, force, and throwing their opponent with high speed, force, and control. A judoka is awarded an ippon (one point) for a throw with all three components. A waza-ari (half point) if one component is less out of three components. Judokas need ippon to win. Judo techniques are performed in three stages: Kuzushi (off-balanced), Tsukuri (turning and fitting), and Kake (execution and completed throw). A judoka first disbalances his opponent, then fits himself into the opponent according to the judo techniques, then lifts and throws the opponent. These three stages also include the biomechanical application of judoka to throw opponents with force (strength) and higher speed. In all this, the height of the judoka also plays an important role. An attempt has been made to give an approximate relation between the height of the judoka and the biomechanical application since the movement of any human body involves some amount of force such as muscular force, center gravity force, frictional force, Law of Motion, and Lever, etc. The advantages of Judoka's Height and various techniques of Judoka according to their height have been told, short height judoka mostly use hand and taller judoka leg techniques.

Keywords: judo, judoka's height, performance, judo techniques, Biomechanical.

INTRODUCTION

Judo is a "gentle way" it's a system of unnamed combat, modern Japanese martial art, and Olympic Sport Judo was created in 1882 by Jigoro Kano. The objective of competitive judo is to throw an opponent, immobilize them with a pin, or force an opponent to submit with a joint lock or a choke.

Judo's philosophy revolves around 2 primary principles: "Seiryoku-Zenyo" (maximum efficient use of energy) and "Jita-Kyoei" (mutual welfare and benefit).

There are three basic categories of waza (techniques) in judo-:

Nage-waza (throwing techniques)

Katame-waza (grappling techniques)

Atemi-waza (striking techniques)

Classification of NageWaza (Throwing Techniques)

Nage-waza (Throwing Techniques)				
Tachi-Waza (Standing Technique)			Sutemi-Waza (Sacrifice Techniques)	
Te-Waza (hand techniques)	Koshi-Waza (hip techniques)	Ashi-Waza (foot and leg techniques)	Ma-sutemi-Waza (rear sacrifice techniques)	Yoko-sutemi-Waza (side sacrifice techniques)

Judo is mostly known for nage-waza and katamewaza. The person who performs a Waza (technique) is known as tori ("thrower") and the person to whom it is performed is known as uke ("receiver"). NageWaza includes all techniques in which tori attempts to throw or trip the uke, usually to place the uke on his back.

Three stages of nagewaza -:

- Kuzushi -: off-balanced.
- Tsukuri -: turning and fitting.
- Kake -: execution and completed throw.

Judo is a highly technical sport in which a judoka uses the techniques of judo against his opponent. Correct performance of techniques requires perfect positioning, timing, execution, and force. The opponent needs to manipulate the center of gravity and balance to throw. Body type and proportions also play an important role in unbalancing the opponent. Height matters a lot in judo because judokas with short heights have a good center of gravity, which maintains their body's stability and balance. The center of gravity of tall judoka is upward, so tall judoka keep their knees bent, in lower thereby maintaining their stability and balance.

In judo, the height of the players matters a lot because when the player comes to the mat, both the players have the same weight, not the height. If one player is tall and the other player is short in height, the player with a **shorter height** uses the following judo techniques.

- Ipponseoi-nage (one arm shoulder throw)
- Tomoe-nage (the circle throw)
- UchiMata (inner thigh throw slip)

Judo techniques such as Morotseoi-Nage, Uchi-mata, and tomoe-nage are the best for short-height judokas.

A tall judoka can take advantage of his height and reach easily. Some throwing techniques are more difficult for tall judokas, while some judo techniques are easier and more beneficial for their height.

In judo, the judoka has to throw his opponent off balance and keep himself in balance. This often requires a tailored approach, especially for a tall judoka. The player with a **taller height** uses the following judo techniques.

- Harai Goshi (sweeping hip throw or Hip Sweep)
- Ouchi gari (large inner reap)
- Kouchi gari (small inner reap)

JUDOKA'S HEIGHT CAN AFFECT THEIR PERFORMANCE

Whether a judoka is short or tall, the height makes a big difference in their performance. Judoka can use their body as a lever to throw their opponent to achieve an ideal position at the perfect time. The judoka's center of gravity will be its strength or weakness, and their height determines the extent of their reach.

➤ **STABILITY OF A JUDOKA**

In natural postures (shizen-hontai) judoka stands naturally with the feet spread to a gap of shoulder width, so that the center of gravity lies within the base of height. Jigo-hontai is the main defending posture for taller judoka. Judoka stands with the low center of gravity and judoka has wider stance in shizen-hontai. As the center of gravity is low and the base larger than in the shizen-hontai body is more stable.

➤ **BREAK THE OPPONENT'S POSTURE:**

As we know, the opponent with the base, the more stable a body becomes. So, if opponent stands still, it would be best to break his stability backwards or forwards in a direction or try to push the opponent toward the left or the right.

It is important to try to break the opponent's posture with body weight and not with hands only. As the body is supported by the lower extremities. It is therefore clear that the lower extremities must be used dexterously so that the body can move freely. They place their foot forward so that they can push body forward to break their opponent's posture backward. If they do not use this principle, there will be the technique of pulling or pushing with their hands. Still, there are some cases when it is unnecessary to draw their foot backward; for example, the tomoe-nage and uki-waza techniques. In these cases, instead of drawing backward, they kick the floor with their foot to make good use of the force that is created when body falls backward.

➤ **LIMB HEIGHT AND LEVERAGE**

Shorter judoka has more leverage and power due to their center of gravity being better stabilized than taller judoka. A shorter judoka doesn't have to lean to a lower point than their opponent, taking advantage of throws that revolve around Koshi-waza (hip techniques) and Te-Waza (hand techniques). Judokas with shorter heights tend to have a more stable base and balance. Long arms and legs can also have many advantages for a tall-height judoka. If the judoka uses them with the right strategy. Tall judoka's have to play more carefully with their shorter-height opponents. When the judoka uses his techniques at the right time with the right understanding and strategy, then he gets the benefit of his height.

➤ MUSCULAR FORCE

Judoka has an advantage over their opponent when his body is larger than his opponent. There is one factor that gives the advantage over a smaller opponent. Tall judoka generates muscular force against the opponent. He can lift early shorter athletes. Although we can say that large muscular force is very convenient for breaking the opponent's posture in judo, Muscular force alone does not encompass all the forces used in judo. We know that coordinated muscular force can give our bodies quick or slow, weak or strong motions at our will. This is what enables you to pull up a heavy block from the ground by making use of the force of reaction that will be produced when you kick the ground with your legs.

➤ CENTER OF GRAVITY

The center of gravity of an upright person is measured from the sole of his feet to the head and the center of gravity is located in the middle of the body, It is about 56% of the person's height. As soon as the person walks or bends or does any movement, then the center of gravity gets displaced. the person's balance gets disturbed, then he starts falling. That's why the center of gravity has an important contribution to maintaining the balance of the person.

➤ LAW' OF MOTION

- **First law of motion:** to break the inertia of the rest of the opponent, force in the judoka of their opponent if they have a good understanding of the nature of force.
- **Second law of motion:** we know that if judoka exerts a force on their opponent and if the body weight is less than judoka, judoka will be able to make him move or fall with comparative ease. On the other hand, if the opponent is heavier than the judoka, the judoka will have more difficulty to moving him and breaking his posture.
- **Third law of motion:** when a judoka makes their body strike against the opponent and the mate, the force exerted on him is not only that of their hand but also that of the momentum produced in their body when it is set in motion. The third law of motion - the law of reaction - proves that a dynamically produced force is more important than the force of the muscles in breaking the posture of the opponent and making him fall as the result of a fast and powerful movement of their body.

ADVANTAGES OF HEIGHT IN JUDO

Shorter judoka has more power due to their center of gravity helping better stability. A shorter judoka doesn't have to lean to a lower point than their opponent, taking advantage of throws that revolve around Koshi-Waza (hip techniques) and Te-Waza (hand techniques). especially things like drop seoi-nage, this is the arch-nemesis of any tall player.

The advantage of being a taller judoka is that the judoka has better visibility and reach, which allows him to measure distance and a better way of getting around or inside the opponent's arms to catch the judoka's judogi. Tall judokas have long legs that allow them to hook their opponent's leg over long distances if done properly. Tall judokas tend to be heavier than shorter judokas which gives them enough speed and force to generate them in a throw or flip technique. Relative height will determine which techniques will work best for judoka. Taller people will be better with ashi-waza (leg techniques) such as osoto-gari and foot sweeps, and shorter people will be better with te-waza (arm techniques) such as seoi-nage.

DISADVANTAGES OF BEING HEIGHT IN JUDO

The main drawback of being a tall judoka in judo competition is that as the judoka moves to use judo techniques, his body's center of gravity also moves, which can cause him to lose his balance, so tall judokas tend to shorten their bodies. bends the knee to alter the movement while keeping the body more stable and at the center of gravity. Judokas with knowledge of biomechanics use their technique to throw with less force and at right angles.

CONCLUSION

In judo, the judoka uses judo techniques against his opponent and defeats him. Here the success of the techniques depends on the points obtained, in which the points ippon and waza-ari are given Ippon one has to throw the other on this back with impetus and control, if the throwing is done with lesser force, then given waza-ari. ippon means one point and waza-ari means 1/2 (half). point is any judoka needs ippon (big point) to win the bout. A correct and successful technique requires perfect position, timing, execution, and force, and also includes the judoka's reaction time, muscular force, lever, the center of gravity, law of motion, etc. used, the height of the judoka also plays an important role in judo, if the judoka is of short height or tall, then it makes a biomechanical component according to its height and weight, and the judoka also has to use the judo technique according to his height. If Judoka's height is short then he can use Judo Techniques like Tomoe-Nage, MoroteSeoi-Nage, Ogoshi, Ippon Seoi-Nage, Kata-Guruman, Morote-gari, Tai-Otoshi, etc. Judoka can use these techniques in his muscular strength/force/power, wrist And Abdominal Force, Center of Gravity, Speed of Reaction, (Reaction Ability), and Law of Motion mostly working on the Third Law of Motion - Law of Reaction. Even if the judoka's height is long, the biomechanical components work according to its height and weight, the taller judoka uses its long arms and legs to move closer and farther away from its opponent, to disbalance the opponent, to break the opponent's posture, attack-Does it in defense. Taller Judoka uses the following judo techniques according to their interest and practices as Harai Goshi, Osoto-Gari, Tai-OToshi, Uchi-Mata, Ouchi-Gari, Kouhi-Gari, Ashi-Guruma, Sumi Gaishi, etc. That is according to the above statement, it can be said that short-heightedjudoka mostly uses hand judo techniques using their hands and abdominal force, while taller judoka prefers to use leg techniques. Therefore, every judoka should practice by selecting

judo techniques according to their height and weight and they should also have knowledge of the biomechanics component working in judo techniques, only then they can perform the techniques properly and correctly and they can't perform by leveling up, you can win by joining high-level tournaments.

Some of the most successful players in judo are small or of average height. This makes sense in a sport that is about throwing your opponent as the smaller (or shorter) you are, the lower your center of gravity. Having a low center of gravity makes you extra stable and therefore, less likely to be forced off balance and thrown.

REFERENCES:

- [Watanabe,J.andAvakian,L.The Secrets of judo.](#)
- <https://en.wikipedia.org/wiki/Judo>
- <https://fighterside.com/best-judo-throws-for-tall-guys>
- <https://www.quora.com/Is-Judo-more-advantageous-to-shorter-or-taller-people>
- <https://grapplingschool.com/does-height-matter-in-judo-the-truth-about-height-in-judo>
- <https://onlyjudo.com/short-vs-tall-in-judo-who-has-the-advantage>
- https://en.wikipedia.org/wiki/Tomoe_nage
- <https://blackbeltwiki.com/uchi-mata-sukashi>
- <https://www.judo-ch.jp/english/dictionary/technique/nage/asi/utimata>

