

Effectiveness of Technical Skills Attacking Senior Athlete Kyourugi at the 2023 World Taekwondo Championship in Baku, Azerbaijan

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ABSTRACT

Objective: This study aims to determine the effectiveness of attack techniques used by senior athletes Kyourugi at the 2023 World Taekwondo Championship in Baku, Azerbaijan. As for the participants in this study, 32 Kyourugi athletes comprised 16 male and 16 female athletes, with the criteria of all athletes entering the final in each competitive class. **Method:** The data collection uses quantitative descriptive by observing the video of the game in the final. **Results:** The results of the effective kick used in competition by senior Taekwondo athletes, male and female, based on the top 6 rankings are Peta Chagi, male Kyourugi athlete at 49.5%, and female Kyourugi athlete at 69.9%, Dollyo Chagi male Kyourugi athlete of 33.7% and the female Kyourugi athlete of 31.5%, Ceking Yeop Chagi male Kyourugi athlete of 22.3%, and the Female Kyourugi athlete of 18.1%, punch (Jireugi) male Kyourugi athlete of 10.6%, and female Kyourugi Athlete of 5.6%, Pyojeuk Chagi male Kyourugi athlete of 8.2% and female Kyourugi athlete of 2.6% and Deol Chagi male Kyourugi athlete of 6.7% and female Kyourugi athlete of 8.4%. **Novelty:** The most effective taekwondo kicking techniques used by senior Kyourugi athletes, male and female, to attack during competition are the Peta Chagi kicking and the punch technique (Jireugi).

INTRODUCTION

Taekwondo, a martial art sport originating in South Korea, is in great demand worldwide (Young, 2009: 2). The advantages of Taekwondo as a means of self-defense, healing and physical fitness, making muscles strong and flexible, enhancing confidence and mental stability, training patience, discipline, and self-control, and not closing the possibility of engraving achievement. Like the one that was revealed by Lopez (2013: 607), "Martial arts are combat sports. In contrast to other sports, they involve more than physical and mechanical phenomena because the spirit is as important as the body". Thus, Taekwondo is also a sport of wrestling that can be used to form a strong mental attitude and good ethics for people who learn it. Opinion Cular (2010:184) "Taekwondo is a martial art and modern Olympic sport very popular among boys and girls all over the world and equal mastery of Taekwondo techniques with both body sides is an important factor of Taekwondo competition success".

Taekwondo is also a modern martial art Olympic sport that is very popular among men and women all over the world, and the mastery of the Taekwondo technique is an important factor in the competition's success. According to Fong (2011:100), "Taekwondo is to train the fighting skills of armies and individual warriors, " meaning Taekwondo was a means of training the combat skills of soldiers and individual soldiers. Taekwondo means the art or way of self-discipline or wrestling using the technique of feet and empty hands. Hi (1987: 21), says in his book that: it "Indicates the mental training and the techniques of unarmed combat for self-defences well as health, involving the skilled

application of punches, kicks, block and dodges with bare hands and feet to the rapid destruction of the moving opponent or opponents. this is one of the reasons that Taekwondo is called an art of self-defense. It also implies a way of thinking and life, in instilling a concept and spirit of strict self-imposed discipline and an ideal of noble moral rearmament”.

Army Taekwondo shows mental training and combat techniques for defense and self-health, which involves beating, kicking, blocking (defending), and bending with bare hands and feet to destroy opponents by moving fast. This is one of the reasons Taekwondo is called the art of self-defense, also means the way of thinking, especially in life, instills concepts and spirit of strict self-discipline and noble moral weapons.

Taekwondo has many advantages, not only teaching physical aspects, such as martial skills, but also emphasizing discipline, responsibility, and strong mental aspects. Taekwondo contains profound philosophical aspects so that in studying Taekwondo, mind, soul, and sport are thoroughly cultivated and developed. Taekwondo is the art of wrestling that uses technique to produce a form of beauty of movement. The three important subjects in the practice of Taekwondo are the technique in the field itself (Taegeuk), the technique of the breakdown of hard objects (Kyukpa), and the last one is fought in the field of taekwondo (Kyourugi). Taekwondo can be learned by touching the physical, mental, and spiritual aspects of the skill and balancing them. For that, a Taekwondo athlete in practice should have demonstrated superior physical condition, strong mental strength, and a high spirit. Fuadi (2016:66) stated that Taekwondo is a martial art that uses the feet and hands, but in practicing Taekwondo, you practice kicks because almost 90% of the points in Taekwondo matches are earned from kicks. This can be seen from video observations of the final round of the Moscow 2019 Word Taekwondo Grand-Prix (<http://youtu.be/bilsd8r24yQ>), one of which is in the senior men’s division competition class, which can be seen in the table below:

Table 1. Men's Senior Competition Class Under 80 kg

Equal class	Athlete's name	Taekwondo technique						
		Kick (Chagi)						Punch (Jeurugi)
		Idan Dollyo Chagi	Dollyo Chagi	Ceking Yeop Chagi	Pyojeuk Chagi	Idan Deol Chagi	Dwi Hurigi	
Under 80 kg	Milad Beigi HARCHEGANI (AZERBAIJAN)	24	12	15	13	1	6	-
	Maksim KHRAMTCOV (RUSIA)	30	1	30	1	-	2	2
	Total Kicks	54	13	45	14	1	8	2

Based on match analysis which applies a matching system that uses PSS, changes in technique and tactics are visible when kicking. The dominant athlete uses several kicks which are used to attack, such as Idan Dollyo Chagi kick with 54 kicks, Dollyo Chagi with 13 kicks, Cheking Yeop Chagi with total 45 kick Pyojeuk 14 kicks Idan Deol Chagi 1 kick,

Dwi Chagi 1 kick, Dwi Hurigi 8 kicks, and punches (Jireugi) 2 punches. Russian athletes won the match. And analysis of the 2021 Sea Games Final match under 63kg between Indonesia versus Vietnam (http://youtu.be/Ilxj_5qciFI). Downloaded July 19, 2022). Dominant technical skills for attacking in the match, such as kicking Idan Dolyo Chagi with 37 kicks and Checking Yeup Chagi with 48 kicks, won a match by Indonesian athletes.

Taekwondo is one of the martial arts branches experiencing rapid changes through modern technology's development. They have applied science and technology in Taekwondo sports, one of which is the Kyourugi category, which used DSS (Digital Scoring System) in the DSS scoring system before PSS, but only uses technology on joysticks. to help referees provide manual assessments. For PSS, this technology comprises a body protector (body protector), head protector (head protector), sock (electronic sock), and joystick (point stick). The existence of electronic-based assessment technology makes championship or match results more accurate and aim (Gardena Irena, 2014). The technology known as the Protector Scoring System (PSS) helps the referee role in reducing negative assumptions when determining points in a match.

As the scoring system continues to develop, the kicking and striking techniques used by athletes are experiencing many changes. Athletes must be able to adapt to changes in this scoring system during the match by using electronic socks. This aims to ensure that athletes, when kicking, can score points because of the t-shirt. They have equipped the electronic feet with sensors. The athlete's kick must hit a permitted or target area on the body where the body protector has used sensors (Udo Moennig, 2017).

This research is very important to find out how effective the kicking techniques used by athletes to carry out attacks to get points and coaches use the results to evaluate strategies that are thought to be more effective in getting points, especially when attacking, which can provide an advantage for every athlete.

RESEARCH METHOD

As for the participants in this study, 32 Kyourugi athletes comprised 16 male and 16 female athletes with the criteria of the finals of each competition class, such as the men's competition (under 54kg, under 58kg, Under 63 kg, Under 68 kg, under 74 kg, below 80kg, below 87kg, and over 87kg) and the female competition. (Under 56 kg, Under 49 kg, Under 53 kg, Under 57kg, Under 62 kg, Under 67 Kg, Under 73kg and Over 73 Kg). The data collection method in this study uses quantitative description by observing video of the match at the 2023 World Taekwondo Championship final in Baku, Azerbaijan. The data analysis used in this study uses descriptive analysis, which should provide a description of the subject of the study based on data and variables obtained from the subject and is not intended for testing a particular hypothesis, but only to describe "what is" about a variable, symptom or condition. (Arikunto, S. 2005:234). In analyzing the data, the researchers use Quantitative Descriptive Analysis, which is statistical in the form of numbers and is presented as a percentage.

$$P = \frac{F}{N} \times 100$$

Description:

P = Percentage

F = Number of Kicks

N = Total Number of Kicks

RESULTS AND DISCUSSION

Results

Kyourugi Athlete Male

Table 1. Percentage of Attacking Techniques Kyourugi Athlete Male

No	Taekwondo Technique	Number of Kick and punch*	Percentage %	Points	Percentage %	Total Percent %	Ranking
1	Peta Chagi	378	36.1	38	27.0	49.5	1
2	Dollyo Chagi	205	19.6	40	28.4	33.7	2
3	Ceking Yeop Chagi	204	19.5	8	5.7	22.3	3
4	Pyojeuk Chagi	38	3.6	13	9.2	8.2	6
5	Dolke Chagi	7	0.7	4	2.8	2.1	10
6	Deol Chagi	48	4.6	6	4.3	6.7	7
7	Ap Chagi	9	0.9	2	1.4	1.6	11
8	Dwi Chagi	26	2.5	4	2.8	3.9	8
9	Dwi Hurigi	8	0.8	4	2.8	2.2	9
10	Yeop Chagi	62	5.9	7	5.0	8.4	5
11	Narae Chagi	9	0.9	0	0.0	0.9	12
12	Pukulan (Jireugi)*	54	5.2	15	10.6	10.5	4
Total		1048		141			

From the above table there are two techniques that are used by attacking athletes Kyourugi son is the technique of kicking and punching, from which the technique is taken 6 top prankings of them rank I *Peta Chagi* total 378 kick and get 38 points with a total percentage of 49.5%, rank II *Dollyo Chagi* total 205 kick and get 40 points with a total percentage of 33.7%, rank III *Ceking Yeop Chagi* total 204 kick and get 8 points with a total percentage of 22.3%, rank IV *Punch (Jireugi)* total 54 punch and get 15 points with total percentage of 10.6%, rank V *Yeop Chagi* total 62 kick and get 7 points with total percentage of 8.4%, rank VI kick *Pyojeuk Chagi* Total 38 kick and get 13 points with total percentage 8.2%.

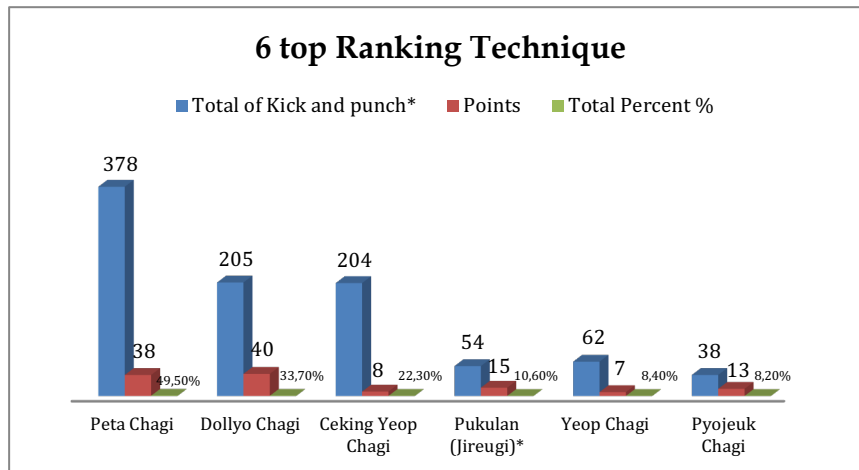


Figure 1. 6 Top Rank of Attacking Techniques Kyourugi Athlete Male

Kyourugi Athlete Female

Table 2. Percentage of Attacking Techniques Kyourugi Athlete Female

No	Taekwondo Technique	Total of Kick and punch*	Percentage %	Points	Percentage %	Total Percent %	Ranking
1	Peta Chagi	670	48.7	85	44.3	69.9	1
2	Dollyo Chagi	259	18.8	51	26.1	31.5	2
3	Ceking Yeop Chagi	201	14.6	14	5.7	18.1	3
4	Pyojeuk Chagi	19	1.4	5	2.3	2.6	7
5	Dolke Chagi	2	0.1	0	0.0	0.1	10
6	Deol Chagi	64	4.7	15	5.7	8.4	5
7	Ap Chagi	1	0.1	0	0.0	0.1	11
8	Dwi Chagi	10	0.7	5	1.1	2.0	9
9	Dwi Hurigi	16	1.2	4	1.1	2.2	8
10	Yeop Chagi	75	5.5	16	6.8	9.4	4
11	Narae Chagi	1	0.1	0	0.0	0.1	11
12	Pukulan (Jireugi)*	57	4.1	6	6.8	5.6	6
Total		1375		201			

From the above table there are two techniques that are used by attacking athletes Kyourugi female is the technique of kicking and punching, from which the technique is taken 6 top rankings of them rank I *Peta Chagi* total 670 kick and get 85 points with a total percentage of 69.9%, rank II *Dollyo Chagi* total 259 kick and get 51 points total percentage of 31.5%, rank III *Ceking Yeop Chagi* total 201 kicks and get 14 points with the total percentage of 18.1%, rank IV *Yeop Chagi* total 75 kick and get 16 points with total percentage of 9.4%, rank V *Deol Chagi* total 64 kick and get 15 points with totals of 8.4%, rank VI *Punch (Jireugi)* total 57 hits and get 6 points total percentage of 5.6%.

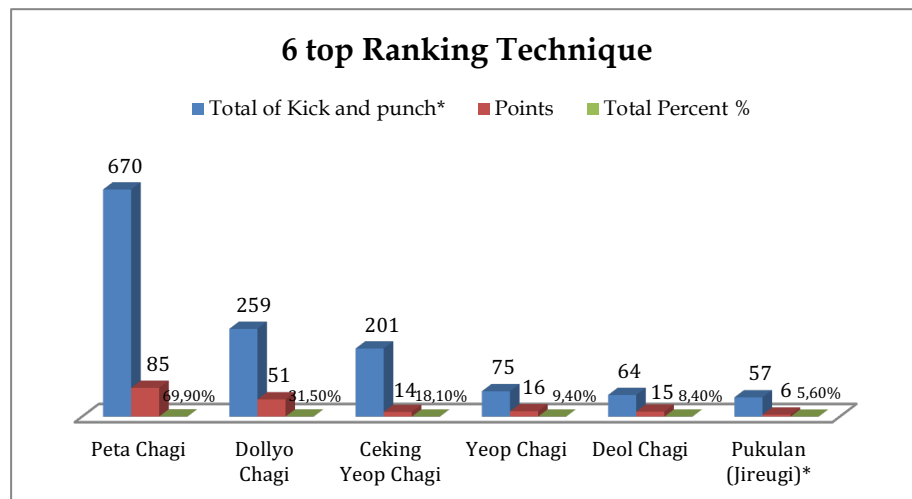


Figure 2. 6 top Rank of Attacking Techniques Kyourugi Athlete Female

Discussion

At the Xuelang Cloud Wuxi 2019 World Taekwondo Grand Slam championship, five kicking techniques were used: *Dollyo Chagi*, *Veta Chagi*, *Ap Hurigi*, *Checking*, and *Dwi Chagi*. (Yudo. F.A: 2019) Of course, these methods have varying success rates. This is also in line with research conducted by Juniar. T.D. (2017) shows that $t_{count} = 3.96$ is greater than $t_{table} = 2.02$, which shows a difference in kicks between *dollyo chagi* and *naeryo chagi*. The *dollyo chagi* technique is very effective because they can use the kicking technique in various positions and situations. The *ap hurigi* kick technique is also the most popular attacking technique, along with the *Dollyo Chagi* technique. This technique targets the opponent's head. This technique is very effective because it gets maximum points, the head area. In line with the research results Admaja, A. T. (2015:25) shows that *abhorigi chagi* kicks taken in matches reached 60.26% of the total other kicks. The upper kick technique, known as the "upper kick technique", can be used in both attacks and counterattacks. This technique is so important in practice and matches that many coaches have developed different versions. They use this technique on opponents who are precise and responsive to attacks (Admaja, A. T.: 2015).

In this study, kicking techniques were effectively used to attack senior Kyourugi athletes. This study's observations showed that 6 top-ranking techniques were used, such as *Peta Chagi*, *Dollyo Chagi*, *Ceking Yeop Chagi*, *Punch (Jireugi)*, and *Pyojeuk Chagi*. and *Deol Chagi*, the following are kicking techniques:

Peta Chagi

Variations of the different side kicks of *Dollyo Chagi* curved using the front legs and back of the legs as an indication of the target toward the abdomen (*Arae*), chest (*Momtong*), or head (*Olgul*).



Figure 3. Peta Chagi

(Source: <https://i.pinimg.com/550x/b5/02/a8/b502a82513c9ba4bf9cd9358b266fec9.jpg>.)

Dollyo Chagi

Dollyo Chagi is a curved sidekick using the back of the leg and besides, using the palm pillow (*Ap Chuk*).



Figure 3. Dollyo Chagi

(Source: <http://www.masterkeyver.com/resources/Kukkiwon/C-Dollyeochagi.png?timestamp=1483955150247>.)

Ceking Yeop Chagi

A variation of the *Yeop Chagi* kick is a side kick with a head or head target using a foot knife.



Figure 4. Ceking Yeop Chagi

(Source: <https://i.pinimg.com/originals/e9/1b/60/e91b60040a37a745bc0ad2c83a127458.jpg>.)

Yeop Chagi

Sidekick with a foot knife.



Figure 5. *Yeop Chagi*

(Source: <http://www.masterkeyver.com/resources/Kukkiwon/C-Yeopchagi.png?timestamp=1483957843473>.)

Pyojeuk Chagi

Pyojeuk Chagi is a jump to the top using the lower leg with the head target using the paws (Ap Chuk).



Figure 6. *Pyojeuk Chagi*

(Source: <https://www.masterkeyver.com/kicks---naeryo-chagi---pyojeok-chagi.php>)

Deol Chagi

Kick hugging towards the head using the heel. This kick can be done by raising the leg as high as possible through the outside, inside, or directly up (front) and dropping as hard as possible towards the target. Target hits are the head, thighs, and chest. When you go down, look forward and keep your body in balance.



Figure 7. *Deol Chagi*

(Source: <http://www.masterkeyver.com/resources/Kukkiwon/C-Naeryochagi.jpg?timestamp=1422863366996>.)

Punch (*Jireugi*)

A punch is a punch with the head of the hand, either with the left hand or with the right hand.



Figure 8. Punch (*Jireugi*)

(Source: <https://wt-korea.com/jireugi-punch/>)

CONCLUSION

Fundamental Finding: Based on the results obtained from video surveillance of the match at the finals of the 2023 Taekwondo World Championship in Baku, Azerbaijan. The effective kick used when competing by senior Taekwondo athletes' male and female daughters based on the top 6 rankings are: 1) *Peta Chagi* male *Kyourugi* athlete of 49.5%, and female *Kyourugi* athlete of 69.9%; 2) *Dollyo Chagi* male *Kyourugi* athlete of 33.7% and the female *Kyourugi* athlete of 31.5%; 3) *Ceking Yeop Chagi* male *Kyourugi* athlete of 22.3%, and the Female *Kyourugi* athlete of 18.1%; 4) Punch (*Jireugi*) male *Kyourugi* athlete of 10.6%, and female *Kyourugi* Athlete of 5.6%; 5) *Pyojeuk Chagi* male *Kyourugi* athlete of 8.2% and female *Kyourugi* athlete of 2.6%; 6) *Deol Chagi* male *Kyourugi* athlete of 6.7% and female *Kyourugi* athlete of 8.4%. The most effective Taekwondo kicking techniques used by senior *Kyourugi* athletes, male and female, to attack during competition are the *Peta Chagi* kicking and the punch technique (*Jireugi*). **Implications:** as a reference, guideline, or point of reference for Taekwondo coaches and trainers to create training programs according to competition needs and to improve the quality of athletes related to Taekwondo techniques in preparing themselves as fully as possible both pre-competition and post-competition. **Limitation:** The limitation of this research is that video observations of Taekwondo matches for national scale athletes, especially local matches

or championships in Indonesia, cannot be carried out because the complete match videos are not available on websites or social media for every Taekwondo administrator, whether on every Pengprov website or even on the central website. Taekwondo Central Management (PBTI), so researchers made observations on videos of international matches, which can be accessed on the official World Taekwondo Federation (WTF) website. **Future Research:** Based on the results, I hope that researchers or academics interested in Taekwondo sports will develop types of training, create training programs that suit competition needs, and develop Taekwondo techniques based on the level of effectiveness in carrying out attacks.

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