

Punching And Kicking Technique Analysis Of The Winner In The 75 Kg Male Kumite Category At Olympic Qualification Tournament 2021

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Abstract: The aims of this study are a. to analyze the punching and kicking techniques which score and do not score points, b. to identify the most effective technique used by the karate athletes in order to score points, and c. to be a reference as a training evaluation parameter. Descriptive study with quantitative approach is used in this study. The research sample is the winner in the 75 kg male kumite category at the Olympic Qualification Tournament 2021. The instrument in this study is the stroke and kick techniques employed. The data is presented with descriptive statistics and is analyzed using the SPSS.26 version. The results of this study show that the punching techniques used score more points for the athlete than the kicking techniques. Based on the results, the total use of the punching techniques is 33 times or 60% and it has a 27.27% (counted points) success rate. Meanwhile, the total use of kicking techniques is 22 times or 40% and it has a 0% success rate.

Keywords: Technique, Kicking, Punching, Kumite

1. Introduction

The origin of karate is from martial arts developed in Okinawa, Japan in the 17th century after Japan successfully took control of the island and banned the use of any weapon. After World War II, karate spreads throughout the world, and is today one of the most exciting combat sports as it is confirmed by millions of people who practice karate around the world (World Karate Federation, 2012). Karate is a type of combat sport and it is one of the most widely practiced Japanese martial arts in the world (Tan KS., 2004). The literal meaning of karate is "empty hands" which means the freedom to use hands without using weapons against opponents (Ziaee et al., 2015). Karate is divided into kata and kumite. Kumite is a real match or fight between two opponents under strict rules. They are free to move, kick and punch by defending and attacking. The rules in karate stipulate the following system of points: 1 point (Yuko); 2 points (WazaAri); and 3 points (Ippon). Ippon is awarded for a foot kick to the head and the clearing and throwing technique, which resulted in a fallen or thrown opponent, or the final punch. Waza-Ari was awarded for kicks to the torso and punches to the back, including the back of the head and neck. Meanwhile, yuko is awarded for a one-handed punch to the head and body (World Karate Federation, 2012). It can be said that kumite oversees the opponents' uses of various movements of defense and attack techniques (Doria et al., 2009) against opponents with points-based performance results (Filingeri et al., 2012).

During a kumite karate match, the karateka uses both upper extremity ("punching") techniques and lower extremity ("kicking") techniques, which can be aimed at the head or chest. However, when the punching or kicking technique is aimed at the head, the karateka must control the execution of the technique so as not to injure the opponent (World Karate Federation, 2019). In a karate competition, there are four judges sitting in one at each corner of the mat, who award points for techniques performed to opponents in the points awarding area when the following criteria are met: great form, sportsmanship, strength, focus, timing, and stances (World Karate Federation, 2019). In addition, the rules specify that a minimum of two judges must wave a flag in order to indicate that the technique must be awarded points and that the referee on the mat must declare their decision. The karateka with the most points at the end of the 3 minute match is the winner. The match can also be completed before 3 minute if one of the karateka is leading by 8 points or more. A previous study finds that there is no significant difference in the number of techniques used during a match between karateka winners and losers (14 ± 5 versus 12 ± 4) (Chaabene et al., 2014 respectively). In addition, karateka winners are found to use the technique to collect more points than karateka losers (Laird & McLeod, 2009). Hence, elite karateka who successfully performs more

techniques in the point awarding area can execute techniques better according to the scoring criteria than less successful karateka. It is reported that elite karateka winners generate more strength in both their upper and lower limbs than those who lose (Roschel et al., 2009).

The ability to produce high-speed action affects the attack power and efficacy of the executed technique. Therefore, movement speed in upper and lower limb techniques is associated with competitive outcomes in championships and world cups (Blazevic et al., 2006).

The speed of execution of upper extremity techniques is generally lower than lower extremity techniques (Daniel & Razvan-Liviu, 2014); however, execution time was shown to be shorter for punches (0.10–0.15 s) than for kicks (0.18–0.29 s) (Chaabene et al., 2015). Due to the short execution time, most of the techniques used by karateka during the match are upper limb techniques (~70-90%) (Chaabene et al., 2014; Koropanovski et al., 2008).

There are often switches of uses of more than one technique, and each fight sequence ranges from less than 1 second to 5 seconds (Beneke et al., 2004; Chaabene et al., 2014; Tabben et al., 2015). It has been reported that about 84% of battle sequences are under 2 seconds in duration (Chaabene et al., 2014), and the average number of fight sequences for karateka during a match is found to be between 16 and 18 (Beneke et al., 2004; Chaabene et al., 2014).

The sequence of high-intensity fights and fast execution of techniques (i.e. high speed of limb movement) make it difficult for judges to decide whether a technique should be awarded points or not. The difficulty of making accurate decisions, apart from identifying the effects of high-speed movement, can be affected by whether some techniques are executed within a few seconds.

Therefore, the challenge for judges is to process fast-moving information under time pressure (MacMahon & Mildenhall, 2012). The judges' decision-making process begins with their perception of the athlete's performance, and the competition is used to implement the judges' prior knowledge and the rules set (Bless et al., 2004; Plessner & Haar, 2006). The duties and demands of judges in sports differ depending on the characteristics of the sport. Therefore, judges were classified into three main categories (i.e. interactors, reactors, and monitors) based on their interactions with athletes in sport arenas and the number of cues or athletes monitored (MacMahon & Plessner, 2008). In order to make accurate decisions according to sporting rules, judges must understand the event accurately so that correct information can be processed (Plessner & Haar, 2006).

The purpose of this study is to analyze the punching and kicking techniques that become counted points and do not become counted points, so that it results in a comparison between those that become points and those that do not. From the results, it can later be useful to identify which technique is the best and most effective for karate athletes to get points in the most effective way and make it easier to get a win, and as a training evaluation parameter.

For that reason, this study can be useful for examining the dynamics of karate in the kumite category. For example, it used to define techniques and tactics from different angles and also to identify the particularities or features of personal uniqueness in athletes. This study can also be useful as an evaluation material for coaches and athletes in kumite karate competitions, so that athletes become even better. In Indonesia, technical performance assessments, especially in the kumite category of karate, have not been widely done. Therefore, the authors believe that this study is important and has many benefits.

2. Research Method

The method used in this study was descriptive observational (JM & Hart, Ej, 2012; Spradley, JP, 2016; Navarro, DJ, Newell, BR, & Schulze, C, 2016). In this study, the observations are intended to determine the technical parameters observed and then, it was examined through the matches. This study intended to analyze the application of punching and kicking techniques in the final of the 75 Kg Male Kumite Category at Olympic Qualification Tournament 2021. The sample was the first winning athlete of the -75 Kg male's karate kumite.

This study was conducted during the final matches of karate Olympic Qualification Tournament for -75 Kg male kumite category in 2021 which was streamed on YouTube on June 12 2021. The instruments used in this study were in the form of a table to analyze how many techniques were done in one match during the final matches of the -75 Kg male kumite category. In addition, the Lenovo Ideapad 330 laptop was used to observe and analyze during the streaming. Meanwhile, the videos were analyzed using the Kinovia app.

2.1 Research procedures

- Conduct observations by watching the final -75 Kg male Kumite streamed video.

- Conduct observations by playing videos using the Kinovia app and making assessments using the instruments mentioned in the previous section.
- Perform data analysis from the observations.

2.2 Data Analysis

The data was analyzed by researchers from the video results from streaming of final matches performed by athlete who won the men's -75 kg kumite. The finishing carried out by the team was analyzed to assess the punching and kicking techniques used by the 4 athletes who entered the final round. The process of hitting and kicking techniques can result in points that can be counted or become violations. The video was initially set at normal speed, after which each move from the athlete was set to a slower speed (1/2, 1/4, or 1/8 of the normal speed) for a more accurate analysis of the punching and kicking techniques used. The results are presented in descriptive statistics using the frequency distribution method. The data results were processed using the Excel 2013 application and the help of SPSS 26th edition. The categories and analysis criteria are as follows:

• Punching techniques

The punching techniques that are often found in the karate kumite category are oi-tsuki, gyaku-tsuki, and kesami tsuki punch (WKF, 2012). In kumite competitions, all punching techniques get 1 point, except the punches that start with a sweep first get 3 points. Points are taken if it does not hit the opponent (skin touch). Otherwise, if the punch technique injures and hits the opponent strongly, a foul will be given.

• Kicking techniques

Kicking techniques that are often found in the kumite category of karate are mawashi geri, and ushiro geri (WKF, 2012). In a kumite match, the kicking techniques done are awarded if those meet two criteria. The first, if the targeted area is in the abdomen and back area, it will be awarded with 2 points. While, if the targeted area is in the head, it will be awarded with 3 points. As same as in the punching technique rule, the kicks which are awarded with points are kicks that do not injure the opponent.

3. Findings and Discussions

Qualitative Analysis Results

The results of this study show that the winner of the final matches of karate Olympic Qualification Tournament for -75 Kg male kumite category in 2021 is Nurkanat Azhikanov who is from Khazaktan. He was able to perform 33 punches and 22 kicks from 3 matches that must be played in the final matches. The picture below illustrates the final results of the 3 matches:



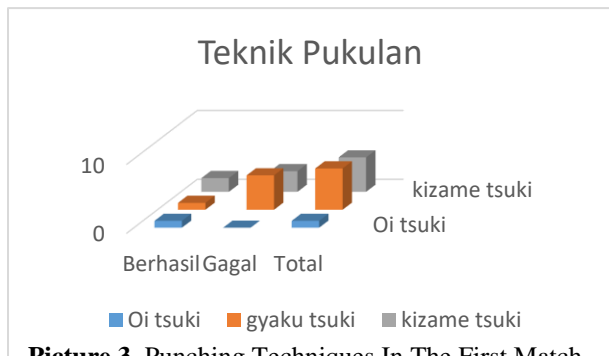
Picture 1. The Number Of Punching Technique



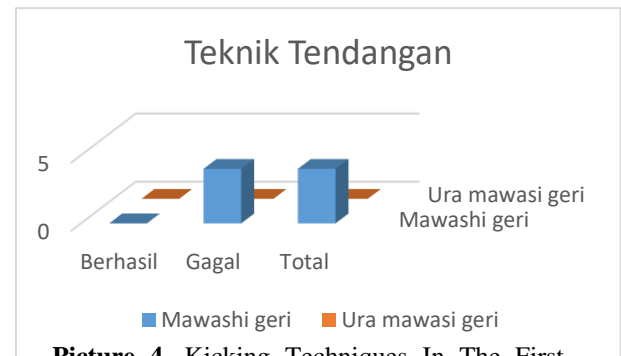
Picture 2. The Number Of Kicking Technique

Based on the diagram above, it can be seen that Nurkanat Azhikanov from Khazaktan in the first match met with Karoly Gabor Harspataki (Hungaira). He could perform 12 punching and 4 kicking techniques. In the second match, he met with Noah Bitsch (Germany) and performed punching and kicking techniques 7 times. In the third match, Azhikanov met with Bashar Alnajjar (Jordan) and performed punching techniques 14 times and kick techniques 11 times.

The following are the explanations of the total punching and kicking techniques performed by Nurkanat Azhikanov (Khazaktan) against his enemies in sequence :



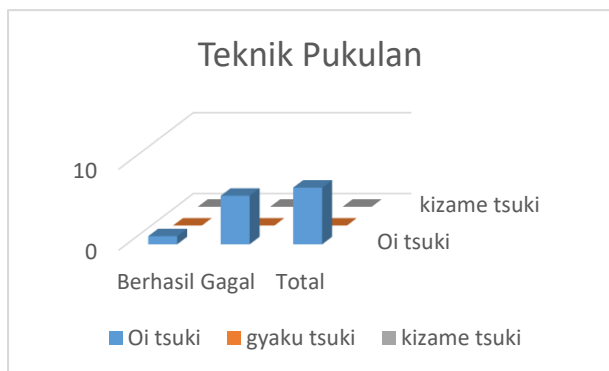
Picture 3. Punching Techniques In The First Match



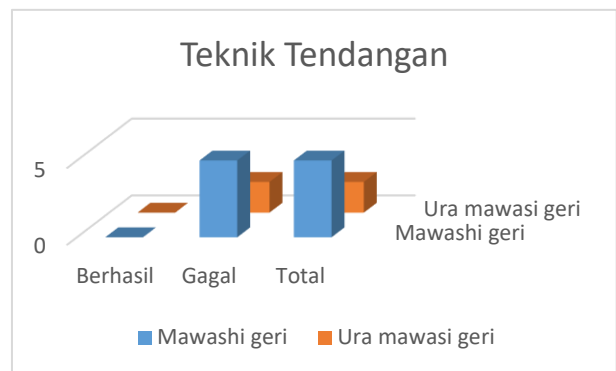
Picture 4. Kicking Techniques In The First Match

In the first match of Nurkanat Azhikanov (Khazaktan) versus Karoly Gabor Harspataki (Hungaira), it was won by Nurkanat Azhikanov (Khazaktan) with the points of 4 : 1. Based on the picture, the kicking technique and the punching technique performed to bring victory for Nurkanat Azhikanov (Khazaktan) are 12 punches by using oi-tsuki (succeed: 1 time, failed: 0), gyakutsuki (succeed: 1 time, failed: 5 times), and kizame tsuki (succeed: 2 times, failed: 3 times). Meanwhile, the kicking techniques performed in the first match are 4 times by using mawashi geri (succeed: 0, failed: 4 times). Ura mawashi geri are not done in this match.

In the second match, Nurkanat Azhikanov (Khazaktan) lost with 1:4 points, even though the intensity of the kick technique was more intense. It can be seen more details in the images below:



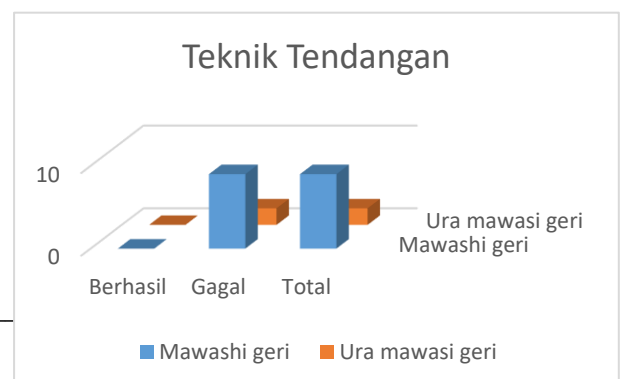
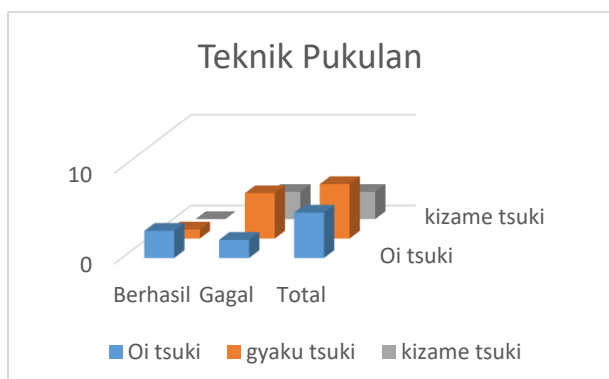
Picture 5. The punching techniques in the second match



Picture 6. The kicking techniques in the second match

From the picture above, it can be explained that the punching technique used in the second match is 7 times by using oi-tsuki (succeed: 1 time, failed: 6 times). Meanwhile, gyakutsuki and tsuki kizame are not done in the second match. The kick techniques performed in the second match are 7 times with mawashi geri (succeed: 0, failed: 5 times) and ura mawashi geri (succeed: 0; failed: 2 times).

In the last game or the third game of Nurkanat Azhikanov (Khazaktan) versus Bashar Alnajjar (Jordan) the match was very fierce, buying and selling attacks with very high intensity occurred. In this game, Nurkanat Azhikanov (Khazaktan) won the game with points obtained 4: 2. In more detail, the punching and kicking techniques used are as follows:



Picture 7. The punching techniques in the third match

Picture 8. The kicking techniques in the third match

From the pictures above, it explains that the punching techniques were performed 14 times in the third match was by using oi-tsuki (succeed: 3 times, failed: 2 times), gyakutsuki (succeed: 1 time, failed: 5 times), and kizame tsuki (succeed: 0; failed 3 times). Meanwhile, the kicking techniques were performed 11 times in the third match by using mawashi geri (succeed: 0, failed: 9 times) and ura mawashi geri (succeed: 0, failed: 2 times).

4. Discussions

In this study, the researchers analyzed the punching and kicking techniques. The subject used by the researcher in this study is the first winner in the -75 kg male kumite competition class. Nurkanat Azhikanov (Khazaktan) as the winner of the final karate Olympic qualification tournament for the Men's -75 Kg kumite category in 2021, performed 33 punches and 22 kicks. Based on the research data, the analysis of Nurkanat Azhikanov's techniques are as follows :

- **Nurkanat Azhikanov (Khazaktan) vs Karoly Gabor Harspataki (Hungaira)**

Based on the results of the first match against Karoly Gabor Harspataki (Hungaira), Azhikanov was able to win the match with 4 points by using a punching technique until the 3 minute time limit was over. The punching techniques in this first match are used 12 times. Hence, the percentage of success of the punching technique is 33.33%, while the failed kicking technique is 66.67%. In this first match, Azhikanov also did kick techniques 4 times, but all of those were not awarded with any point or in other words the percentage of failure in kicking techniques in this first match is 100%.

From the results stated, it can be concluded that the victory achieved by Azkanov is the result from the punching technique he did.

- **Nurkanat Azhikanov (Khazaktan) vs Noah Bitsch (Germany)**

Based on the results of the second match against Noah Bitsch (Germany), Azhikanov lost the match by only collecting 1 point from using a punching technique until the 3 minute time limit was over. He performed the punching techniques 7 times, so the percentage of success of the punching techniques is 14.28%, while the percentage of the failed punching technique is 85.71%. In this second match, Azhikanov also performed kicking techniques 7 times, but all of them also failed, or in other words the percentage of failure in kicking techniques in the second match was 100%.

It means that the points obtained by Azhikanov were the results of the punching techniques which he did, although he lost the second match.

- **Nurkanat Azhikanov (Khazaktan) vs Bashar Alnajjar (Jordania)**

Based on the results of the 3rd match against Bashar Alnajjar (Jordan), Azhikanov won again by collecting 4 points performing punch techniques until the 3 minute time limit was over. In the third match, he used the punching techniques 14 times, so the percentage of the successful punching technique is 28.57%. Meanwhile, the percentage of the failed punching techniques is 71.42%. Azhikanov also performed kicking techniques 11 times, but all of them were not awarded by any point, or in other words the percentage of the failure in kicking techniques in the third match was 100%.

The explanation above explains that the points gained by Azhikanov were the results from using the punching techniques, so that he got 4 points from the assessment of the referee and judges.

5. Conclusion

The purpose of this study is to create parameters that can be used in evaluating the training process, especially in the kumite karate category. Based on the results, the winner of the final round is Nurkanat Azhikanov (Khazaktan). Using the punching techniques is more effective for the athlete to gain points than using the kick techniques. This can be seen from the total use of punching techniques in the final match. It occurs 33 times or 60% of the total attacking techniques and it achieves 27.27% of success points (counted points). As for the kick techniques, it is done 22 times or 40% of the total attacking techniques, however the success point is 0%.

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