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Movement Analysis of Two Hand Backhand Techniques in Unimed Tennis Field Community Athletes in 2021

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Abstract

The aim is to analyze the two handed backhand motion of the athletes of the Unimed Tennis Community in 2021.The research was carried out at the Medan State University Tennis Court (UNIMED) Jln. William Iskandar Pasar V Medan Estate. Data collection was carried out on October 25, 2021. The number of samples in this study amounted to 3 people. This research is a kind of quantitative approach research (non-experimental) by analyzing the motion of the two-handed backhand technique between athletes who are used as comparisons with international athletes as samples using the Dartfish teampro 5.5 software.The percentage of successful movements analyzed using darfish software Two-handed backhand technique, the position of the prefix movement is Very Good (30%), Good (26.66%), Less (40%), Very Poor (6.66%). The position of the implementation movement is Very Good (14.81%), Good (25.92%), Poor (11.11%), Very Less (48.14%). Position of follow-up Very Good (12.5), Good (41.66%), Poor (16.66%), Very Less (29.16%).

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INTRODUCTION

Sport is a physical activity that involves the body as a whole and if done correctly and repeatedly is very beneficial for both one's health and psychological well-being. Sport also includes three important things such as cognitive, affective and psychomotor. These three aspects are important in achieving achievements in the world of sports. Sport is a series of regular and planned exercise that people do consciously to improve their functional abilities (Giriwijoyo 2005) Sports or regular physical activity can reduce the risk of chronic disease, reduce stress and depression, improve emotional well-being, energy levels, self-confidence and satisfaction with social activities (Jane, E. Ruseski 2014)

Field tennis is one type of sport that is popular and much-loved by all levels of society in the world, especially in Indonesia. Court tennis is a sport usually played between two players or between two pairs with two players each. Each player uses a racket to hit the ball. The object of the game is to play the ball in such a way that the opposing player cannot return the ball. There are four basic types of strokes in tennis, namely: 1) service, 2) forehand, 3) backhand, 4) volley. Once you are proficient in these four strokes and you are confident with them and have the speed, distance, direction and control, then you are close to mastering the game of tennis.

Currently, there are two types of backhand strokes that are popularly used, namely: one-handed backhand and two-handed backhand. Each stroke has advantages and disadvantages. However, nowadays, the development of tennis playing techniques is more dominant using a two-handed backhand where many benefits are obtained by players using this grip, including: more consistent when compared to a one-handed backhand, can exert greater force on the ball so that the ball moves faster. to the opponent's field, can control the ball because the grip on the racket is stronger and it's easier to control the ball. (David, 2017)

Groundstroke is the most important technique in tennis because groundstroke is the most frequently used stroke, groundstroke is also one of the weapons in winning the match. And this blow is often used as a blow to attack. For beginners, one type of stroke that must be mastered is the groundstroke. This is because groundstrokes are very important that must be mastered by players, because in playing games or matches, groundstrokes are the most frequently used. as stated by that "the average player makes groundstrokes in a game 35 - 45% of all strokes during a game or match". (Palmizal, 2011). the total number of strokes during a game or match". (Palmizal, 2011). In the results of research conducted by (Seff et al., 2017) on the success rate of groundstroke forehand & backhand strokes of Indonesian tennis national team players during the Davis Cup match between Indonesia Vs Vietnam in 2016, the total results were 1000 strokes with a rally of 786 times, created 214 points and lost 228 points (unforced error). This shows that the success rate of creating points of 83% comes from the forehand & backhand groundstroke technique (Training et al., 2021). Observation results On March 5, 2021 with coach Mr. David Siahaan after doing exercises at the Unimed Tennis Community stated that the two-handed backhand movement is very important in the game of Court Tennis, because the two-handed backhand is the most frequently used stroke, also one of the weapons in winning. competition. And this punch is often used as a blow to attack, from the observations of the coach in analyzing the motion of the two-handed backhand technique so far only using the sense of sight, namely the eye in the process of analyzing the athlete's technical motion. This feels less than optimal because the eye has limitations. Therefore, the researcher offers one technology that can help the coach's performance, namely using a video camera that functions to record the

athlete when performing a two-handed backhand movement, then the video can be analyzed using a software analysis system (dartfish software) which helps the coach in analyzing the technique. athlete movement.

METHODS

This research is a type of research using quantitative (non-experimental) methods. quantitative (non-experimental) is a study in which the researcher does not have the opportunity to provide treatment or manipulate variables that may play a role in the emergence of a symptom, because the observed symptoms have occurred. (Maksum 2012). non-experimental quantitative is used to get the results of the analysis in the form of numbers.

According to Sugiyono (2007) research instruments are a test tool used to collect data to support the success of a study. The instrument used in this research is Dartfish and the two-handed Backhand motion test instrument.

Participants

The initial backhand data were taken by researchers from 12 athletes from the UNIMED tennis community. Researchers used the hewit test to take their accuracy when hitting and see the correct movement. Judging from the results of the test data, it can be seen that the backhand ability of the UNIMED tennis community athletes from 12 treatments, only three got very bad. Based on the backhand analysis table. (Appendix III).

Sampling Procedures

The sample is part or representative to be studied. The sampling technique used in this study was a purposive sampling technique because not all Unimed Tennis Community athletes met the following criteria: (1) Male tennis players (2) Have mastered the two-handed backhand groundstroke, (3) Active in training, (4) Registered in the Unimed Tennis Community, (5) Willing to be a research sample.

The researcher conducted a preliminary test and also conducted a temporary analysis test by viewing the video in the initial test. The assessment is carried out using a Liker scale. What is assessed is the movement of the racket head, hand swing movement, waist movement and leg movement. 12 athletes did the movement, 9 people got an E and 3 people got a D. So only 35% did the right move. (Appendix III)

From the results of the interim analysis, the researchers focused on the athletes in the red block (Appendix II). Because these athletes meet the criteria as a sample of researchers. The data was obtained by the researchers when the athlete did the initial test. So the researchers are very interested in conducting research on the analysis of the motion of the two-handed backhand technique in the Unimed Tennis Community athletes, with the aim of knowing the correct two-handed backhand movement technique using the darfish application.

Materials and Apparatus

Based on the theoretical study, problem formulation, and several explanations that have been described previously. So a conceptual framework was made with the following definition: two-handed backhand technique is the most important part in field sports. However, seeing how important this technique is to be mastered by every player, there is no basis or one used to train the correct movement technique. In the modern world like today we cannot deny the development of science and technology in sports. His role in achieving the highest achievements in the eye can be seen. The more it develops, the more support for training such as biomechanics which aims to analyze the motion of an athlete when carrying out competitive training activities.

By practicing and mastering the stroke a player will learn and lay solid hitting foundations in tennis and the foundation on

which to build other strokes. Novak Djokovic, Professional tennis player "Dartfish is a solution that helps me to improve error analysis and impact for match preparation" (dartfish.com, in.d). It is hoped that using the dartfish software in this study can analyze and describe the two-handed backhand technique as a reference material for trainers to train and apply the correct movement according to the results of the analysis in this study.

Procedures

The stages of research that will be carried out by researchers are as follows:

1. Coordinate with trainers to carry out research
2. Determine the object of research, in this case the object of research is the male athlete of the Unimed Tennis Community in 2021
3. Observing the male athletes of the Unimed Tennis Community in 2021 and collecting data and finding problems in more detail
4. Looking for references related to the problems found, in this case the problem found is the two-handed backhand movement of tennis
5. Find and study the theory related to the two-handed backhand technique in court tennis.
6. Doing research using Dartfish Software
7. Analyzing research by making data grouping tables
8. Make a percentage of the research results obtained
9. Draw conclusions and provide suggestions

In this study, researchers analyzed the angle of motion of the body of the sample and compared it to international tennis athletes. International athletes in this study as a benchmark for the correctness of the two-handed backhand motion in tennis.

Design or Data Analysis

Dartfish, as for supporting research instruments for dartfish software including laptops, cameras and tripods. From the data obtained, the researcher will compare the sample with international athletes by analyzing the data with the darfish application. The researcher also made a table that was equipped with a percentage. From the results of the percentage table that the researcher can describe and draw conclusions from the research.

RESULT

Data acquired from the research with appropriate statistical analysis described in the methods section should be included in this section. In this part, the same data/ information given in a table must not be repeated in a figure, or vice versa. Tables and Figures should be self explanatory and it is not acceptable to repeat extensively the numerals from tables into text and give lengthy and unnecessary explanations of the Tables and Figures.

Figures

From all the two-handed Backhand data that have been analyzed using dartfish software, the following results are obtained: The position of the prefix movement is Very Good (30%), Good (26.66%), Less (40%), Very Poor (6.66%). The position of the implementation movement is Very Good (14.81%), Good (25.92%), Poor (11.11%), Very Less (48.14%). Position of follow-up Very Good (12.5%), Good (41.66%), Poor (16.66%), Very Less (29.16%).

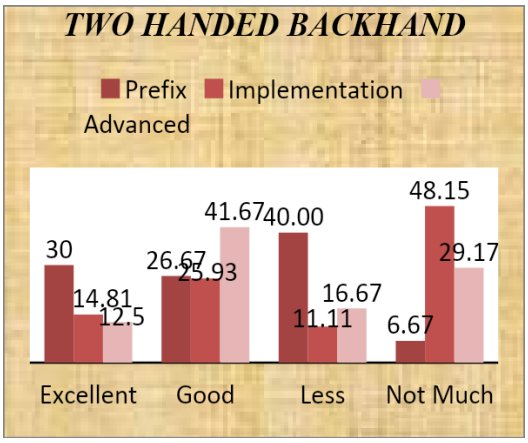

Fig 1. Graphic

DISCUSSION

Based on the results of research conducted and discussed in the previous chapter, the researchers drew the following conclusions: The results of the analysis of the two-handed backhand technique show that the movement of the first athlete (Gulasa) in the starting position, the movement is not appropriate when pulling the racket, the athlete's right shoulder does not face the net and the athlete's left hand should not be straight, there must be a slight bend as done by the athlete. comparison. for the legs to be maintained. Execution Position It can be maintained, but when you want to hit the ball, bend your foot a little more to build power when hitting the ball. The Advanced position of the right and left legs must still have a bend as the comparison did, but the athlete's legs are not bent. for the racket and body angle is correct.

The second athlete (Gabriel) The starting position is that the movement does not match the angle of the body with the right hand not being pulled back a little longer, and the left leg being bent less as was done by the comparison athlete. For the racket angle, the distance between the right foot and foot is good because the level of compliance with the comparison is high. Implementation Position, the right wrist is less bent and the left wrist must be straight as the comparison did. Advanced position, the left hand should not be bent directly, it must be brought back to the front and the right leg and left leg are not bent as the comparison did.

Third Athlete (Boby) Preliminary Position, that the movement of the right foot and left foot is not appropriate, which is opened too wide, the left elbow is too bent and the body angle is not backward so it does not match what the comparison is doing. Execution position, on the right leg that is too wide open, the right wrist is not bent and the left wrist must be straight as the comparison did. Advanced position, when hitting the ball the athlete does not bring his left hand forward, he immediately brings it to the shoulder and the legs need to be opened wide so that the athlete's balance is not as good as the comparison. Of the three samples that are very close to the results, the comparison athlete is the first athlete whose movements can be said to be almost the same

CONCLUSION

Based on the results of research with the Darfist application and has been discussed in the previous chapter, the study draws the following conclusions:

1. Based on the results of the analysis of the two-handed backhand technique, it is still necessary to improve the movement in the initial, implementation and advanced stages.
2. In the initial stage, the error is more dominant in the body angle and racket angle, the athlete is still dominant in turning the shoulder less so that the right shoulder faces the net.
3. At the implementation stage, the error is more dominant in the wrist and foot angle. Should be on the wrist. the right hand is bent and the left wrist is straight, for the angle of the foot in the implementation it must be bent because it is very influential in balance and adds power when hitting the ball
4. in the advanced stage, the error is more dominant in the racket angle, at the time of follow-through the athlete does not swing the length of the racket forward, bends the elbow less and swings the racket to the shoulder
5. Analysis using darfist software is very useful for coaches because it can see the correctness of movements and analyze every movement of athletes.

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REFERENCES

Abdul Alim. (2019). Teknik dan Taktik Bermain Tenis Lapangan.

Giriwijoyo, D. (2005). Ilmu Faal Olahraga. Bandung: PT Remaja Rosdakarya.

Hartmann, Doug. and Kwauk, C. (2011). Sport and Development: An Overview, Critique, and Reconstruction. Sport & Socialissues, 284–305.

İbrahim, C. A. M., Turhan, B., & Zeynep, O. N. A. G. (2013). The analysis of the last shots of the top-level tennis players in open tennis tournaments. Turkish Journal of Sport and Exercise, 15(1), 54–57.

Jane, E. Ruseski., Brad, R. Humphreys., Kirstin, Hallman., Pamela, W., & Christoph, B. (2014). Sport participation and subjective well being. Journal of Physical Activity and Health, 396–403.

Jim, B. (2007). Tenis tingkat pemula. Jakarta: PT RajaGrafindo.

Mundaru. (2006). Olahraga alternatif badminton dan tenis.

Nurkadri. (2017). Model Latihan Teknik Dasar Tenis Lapangan Untuk Pemain Pemula. Bekasi: Cakrawala Cendekia.

Palmizal, A. (2011). Pengaruh Metode Latihan Global terhadap Akurasi Groundstroke Forehand dalam Permainan Tenis. Media Ilmu Keolahragaan Indonesia, 1(2). https://doi.org/10.15294/miki.v1i2.2029

Sudjana. (2002). Metode Statistik. Bandung: Tarsito Bandung.

Sugiyono. (2013). Metodologi Penelitian Pendidikan. Alfabeta, cv. Bandung: Alfabeta cv.

Sukadiyanto. (2003). Teori dan metodologi melatih fisik petenis. Yogyakarta : Fakultas Ilmu Keolahragaan UNY.

Yasriuddin, & Wahyudin,(2017). Tenis Lapangan Metode Mengajar & Teknik Dasar Bermain. In Yogyakarta: Andi.

G., Dalam, G., Video, B., Atlet, U., Tennis, J., Arifianto, I. Jatra, R. (2021). Training, Jurnal Mensana. 6, 12–22.

Yudoprasetio. (2002). Belajar Tenis Jilid 2. Jakarta: Bharata Karya Aksara.