

https://doi.org/10.29407/js unpgri.v11i2.25080



Video analysis: Receive technique in semi-professional sepak takraw matches

Topo Yono 1 abcdef, Nugroho Susanto 2 bcdef, Ratko Pavlovic 3 cdef.

¹Department of Physical Education, Faculty of Teacher Training and Education, Muhammadiyah Jember University, Jember, East Java, Indonesia.

²Department of Health and Recreation, Sports Science Study Program, Faculty of Sport Science, State University of Padang, Padang, West Sumatra, Indonesia.

³Department of Physical Education and Sports, Faculty of Physical Education and Sports, University of East Sarajevo, East Sarajevo, Bosnia and Herzegovina.

Received: 19 March 2025; Revised: 25 April 2025; Accepted: 27 May 2025; Available online: 01 August 2025.

Abstract

Reception analysis plays a crucial role in modern sports. One essential aspect of match analysis in Sepak Takraw is the reception technique. This study aims to analyze reception techniques through video recordings of semi-professional Sepak Takraw matches. The research employs a quantitative descriptive method using an indirect observation approach (video analysis). In its implementation, the researchers analyzed match footage to evaluate the receiving techniques used during the final match of the double event between the Jember and Malang teams at the 2023 East Java POMPROV. A purposive sampling technique was used to determine the research subjects, focusing on the receptions performed by both teams during the final match. The instruments in this study included video recordings and an observation checklist (receive analysis sheet), categorizing reception outcomes into successful receives (R1) and unsuccessful receives (R0), Data were analyzed using Microsoft Excel to calculate the number and percentage of successful and unsuccessful receptions. The descriptive analysis revealed that Jember had a higher success rate in both sets. In Set 1, Jember achieved a perfect reception success rate of 100%, while Malang reached 92.31%. In Set 2, Jember maintained the lead with 93.75%, whereas Malang recorded 90.56%. The conclusion indicates that the Jember team outperformed the Malang team in terms of reception success during the final match. These findings are expected to serve as a valuable evaluation tool for coaches aiming to enhance reception techniques in Sepak Takraw and for athletes seeking to improve their performance.

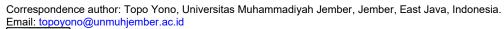
Keywords: Receive, sepak takraw, analysis, POMPROV East jawa 2023.

How to Cite: Yono, T., Susanto, N., & Pavlovic, R. (2025). Video analysis: Receive technique in semi-professional sepak takraw matches. *Jurnal SPORTIF: Jurnal Penelitian Pembelajaran*, 11(2), 222–238. https://doi.org/10.29407/js_unpgri.v11i2.25080

Authors contribution: a – Preparing concepts; b – Formulating methods; c – Conducting research; d – Processing results; e – Interpretation and conclusions; f - Editing the final version.

INTRODUCTION

Analyzing match plays a crucial role in modern sports, as it enables coaches and athletes to assess performance accurately, refine strategies,





and enhance techniques using real performance data (Prastyana, 2020). Beyond technical improvements, match analysis also strengthens athletes' mental and physical preparedness, aids in identifying opponents' tactics, and serves as a foundation for designing and adjusting training programs (Firdaus & Muhammad, 2024). On a broader scale, it supports the growth of sports science by offering empirical evidence valuable for research, innovation, and the continuous development of effective training methods (Ningsih et al., 2023). One of the match analyses that needs attention in Indonesia is Sepak Takraw.

In the game of sepak takraw, each player must understand various advanced methods to improve playing ability (Wiwik, 2020). The game of sepak takraw requires understanding and mastery of the material, and the techniques that must be mastered by players in order to play optimally include starting kick (service), smash rolls, smash, block, heading, and receiving the first ball (receive) (Roszani et al., 2023). Receiving the first ball is one of the important techniques that must be mastered in sepak takraw (Prasetyo et al., 2024). This technique is used to receive the ball from the opponent's attack (Moh. Hanafi, 2020). Receiving the first ball (receive) is a skill that is no less important than serving (Yudanto et al., 2024), because failure to receive can give a big advantage to the opponent (Moh. Hanafi, 2020). Receiving a serve (receive) is a form of defense and the first step in carrying out an attack. Receiving a serve is a defense technique used to withstand an opponent's attack, as well as being the start of a counterattack. Practicing receiving the ball from an opponent is an important part for every sepak takraw athlete, because this technique determines the course of the match and is not easy to master (Rusli, 2022). Reception techniques are fundamental in sepak takraw, as they help sustain game continuity and set the foundation for effective offensive plays. Relying solely on physical practice or verbal guidance is often insufficient for players to fully master these skills. Therefore, a more systematic and evidence-based method is required to accurately assess and enhance player performance. The use of visual media and videos in

ISSN : 2477-3379 (Online) ISSN : 2548-7833 (Print)

training can enhance athletes' motivation and improve training outcomes, both in terms of technical quality, thus serving as a basis for the development of new training methods by coaches and athletes (Simanjuntak & Maksum, 2021). Video analysis serves as a valuable solution in this context. By reviewing recorded footage, both coaches and athletes can examine intricate aspects such as movement mechanics, posture, timing, and strategic patterns with greater precision. This method also makes it possible to detect technical flaws and tactical misjudgments that might go unnoticed during regular training sessions (Andreanto et al., 2024; Budiman & Rusdiana, 2019; Romadona et al., 2022). Consequently, incorporating video analysis becomes a vital component in refining reception techniques and supporting players in reaching peak performance during competitions.

Previous research on the analysis of men's inter-team skills in the 2018 Indonesian Asian Games Sepak Takraw final match found that the percentage of skills of the Indonesian Sepak Takraw inter-team team was still below that of the Malaysian Sepak Takraw inter-team team (Padli et al., 2023). In POPNAS 2019 between East Java and West Sumatra, it was found that the results of this study in set 1, East Java, managed to do 14 successful receives and 0 failed receives. However, in set 2, the number of successful receives decreased to 14, and the number of failed receives increased to 1. West Sumatra in set 1 managed to do 15 successful receives and 1 failed receive. In set 2, West Sumatra's successful receive increased to 17 and failed receive 1 (Yuliarti, 2021).

In this regard, the final match between Jember and Malang in the 2023 East Java POMPROV presents a highly relevant case for analysis. As a regular intercollegiate competition across East Java, POMPROV showcases high-level play, and the final round brought together two top-performing teams, offering a rich display of competitive intensity and advanced technical-tactical execution. Studying its effectiveness under high-pressure conditions provides valuable insight into how this fundamental skill contributes to team success. Furthermore, the findings

can serve as a useful reference for coaches and athletes in improving core technical abilities, particularly in doubles events, while also guiding the development of more focused, evidence-based training strategies (Piri & Makadada, 2024; Prasetyo et al., 2024). However, the analysis of receive of the Sepak Takraw Double Event Match at the 2023 East Java POMPROV is not yet known. Analyzing a match is essential because it reveals insights into the game's dynamics that often go unnoticed in real time. It allows coaches and players to thoroughly assess performance, pinpointing both strengths and areas that need improvement, whether on an individual level or as a team, technically, physically, or tactically. Beyond evaluation, analysis is crucial for shaping smarter strategies by examining how both the team and opponents play. Mistakes in technique or decision-making, which might be missed during live play, become clearer when reviewed through video footage or statistical breakdowns. This kind of objective feedback supports better choices in training methods, player selection, and game planning. Moreover, players can refine their skills more effectively by reflecting on their performance. Match analysis also plays a key role in scouting opponents, helping teams anticipate patterns and prepare more strategically. In short, analyzing matches is a vital process that drives performance enhancement, strategic growth, and continuous learning in sports. Matches require analysis because, through this process, athlete performance and team strategy can be evaluated objectively and systematically.

Based on the above problems, this study aims to determine and analyze the receive in the final double-event match, Sepak Takraw Jember vs. Malang POMPROV East Java 2023. This research focuses on match video analysis. The observation method is to observe the receive on Sepak Takraw. Data is recruited from video analysis by recording success and failure in receiving the ball in Sepak Takraw. Data presentation is in the form of percentage of success and failure receive results.

METHOD

ISSN : 2477-3379 (Online) ISSN : 2548-7833 (Print)

This research used quantitative methods with a descriptive approach. Descriptive research is a research method that aims to provide an objective overview or description of a situation. A quantitative approach to analyzing receive in sepak takraw emphasizes gathering numerical data based on how players handle incoming serves. This research uses a purposive sampling technique. Purposive sampling technique is a deliberate selection of subjects based on certain criteria that are relevant to the research objectives. The sampling method explains the most appropriate technique for various types of research, making it easier for someone to choose and apply the most appropriate method for their research project. The subject of this research is the receive of the Sepak Takraw athletes from the Jember and Malang teams during the final match of the double event at the 2023 East Java POMPROV 2023. The data source obtained in this study was through the final match of the double event sepak takraw Jember VS Malang, POMPROV, East Java, 2023. Analyzing receive techniques in sepak takraw plays a vital role in ensuring an unbiased and structured assessment of both individual athlete performance and overall team tactics. This study specifically selected the final round of the double event at the 2023 East Java POMPROV, as it features a high-intensity match between the region's strongest teams, where players are expected to demonstrate their highest level of skill and strategic execution. By concentrating on this decisive match, the analysis can reveal how receive techniques are utilized in high-pressure scenarios and crucial moments of play. Furthermore, matches of this caliber usually come with clear and professionally recorded footage, which is essential for conducting precise and reliable video analysis.

The instruments in this study were video recording, an observation checklist, and an analysis sheet. Data collection techniques are through observation and data analysis techniques taken through quantitative analysis, data from observations and videos are analyzed by calculating the number of successful and failed receives, as well as patterns of errors that occur. With this analysis, it is hoped that it can provide valuable input

for players, coaches, and fans of Sepak Takraw to understand and optimize receive techniques in matches. The results of the observation checklist or the analysis sheet data are then analyzed using percentages.

ISSN : 2477-3379 (Online) ISSN : 2548-7833 (Print)

Research Procedure

This typically involves measuring several key indicators, such as:

- Total successful receives: instances where the player manages to control the ball effectively, allowing it to be passed on to the tosser or attacker.
- 2. Total unsuccessful receives: situations where the receive leads to a point lost or the ball cannot be continued into play.
- 3. Success rate of receives: the proportion of accurate receives compared to the overall number of receive attempts.

The video analysis technique is implemented through a structured process, either with the help of specialized software or through direct manual observation. The following outlines the key procedural steps:

- Collecting Video Footage
 - a) Game recordings are sourced from official broadcasts or internal team archives.
 - b) The footage must be of sufficient clarity to accurately analyze individual player movements.

2. Segmenting the Footage

- a) The video is broken down based on sets, rounds, or player rotation sequences.
- b) Special attention is directed toward moments when players execute receive actions.

3. Action Coding

a) Each receive is categorized with a specific code, such as marking successful receives with "R1" and unsuccessful ones with "R0." The method of collecting research data involves observing matches through video recordings. This approach represents an indirect form of observation that allows researchers to evaluate the *receive* technique in sepak takraw in an objective and quantifiable manner. The process follows a structured series of steps:

1. Video Selection and Acquisition

Match footage is gathered from reliable sources, including national-level recordings, coach archives, or internal team documentation. It is essential that the video quality is sufficiently high to ensure that each player's movements can be clearly examined.

2. Segment Identification

Once the videos are obtained, the relevant portions, specifically those involving *receiv*ing actions, are isolated. Segmentation is typically based on sets, player rotations, or opponent serves aimed directly at the receiving player.

Receive Action Documentation and Coding

Each instance of a *receive* is noted and categorized. Specific codes are assigned to distinguish outcomes, such as:

- a. R1: a successful receive, where the ball is properly directed to the tosser or attacker
- b. R0: an unsuccessful receive, where the ball cannot be followed up or leads to a point loss

Data Logging and Analysis

All observations are documented in structured data sheets or digital spreadsheets. The compiled data is then analyzed statistically to identify recurring patterns, performance trends, or comparative differences between players or teams.

ISSN : 2477-3379 (Online) ISSN : 2548-7833 (Print)

Data Analysis

The results of the observation checklist or receive analysis sheet data. Based on the data obtained, data analysis was continued using Excel to analyze the number of received Set 1 and Set 2 on both teams. The data analysis used in this study is descriptive analysis, which includes calculating the total number and percentage of successful and unsuccessful receives with the formula below:

$$Percentage~(\%) = \frac{Success~or~unsuccess~receive}{Total~success~or~unsuccess} \times 100\%$$

RESULT

The findings in this study are based on an analysis of match footage sourced from YouTube. The following will present the results of the success and failure received from the video analysis of the semiprofessional sepak takraw matches of Jember and Malang Pomprov 2023. The results of the receive analysis of Jember vs Malang in the first set are shown in the following table:

Table 1. Receive Jember vs Malang Set 1

	Receive	Results Set 1	Percentage
Jember	Success	14	100%
	Unsuccess	0	0%
Malang	Success	12	92.31%
•	Unsuccess	1	7.69%

Table 1 indicates that in Set 1, Jember successfully completed 14 receives, achieving a 100% success rate with no failed attempts. In contrast, Malang recorded 12 successful receives, corresponding to a 92.31% success rate, and 1 failed receive, accounting for 7.69%. The analysis for Set 2 will be discussed in the following section. In sepak takraw, a receive is categorized as successful when the ball is effectively controlled using proper techniques such as utilizing the feet, thighs, or chest without resulting in an erratic bounce, and can be accurately directed toward the tosser or spiker, allowing the game to proceed into the offensive phase. The action must also comply with game regulations, meaning there should be no hand contact or double touches, and the ball must be directed with stability toward a strategic

area of play. This type of receive is typically marked with the code R1. On the other hand, a receive is deemed unsuccessful if the ball is mishandled, placed too far from teammates, or cannot be followed up, leading to a point loss or violation such as hand contact or the ball touching the floor before being received. Such instances are labeled with the code R0.

The results of the receive analysis of Jember vs Malang in the second set are shown in the following table:

Table 2. Receive Jember vs Malang Set 2

Group				
	Receive	Results Set 2	Percentage	
Jember	Success	15	93.75%	
	Unsuccess	1	6.25%	
Malana	Success	1 17	90.56%	
Malang	Unsuccess	1	9.44%	

In Set 2, Jember recorded 15 successful receives, resulting in a success rate of 93.75% and 1 failed receive at 6.25%. Meanwhile, Malang achieved 17 successful receives with a success rate of 90.56%, and 1 failed receive, totaling 9.44%. The following section will present a comparison of the receive percentages between Jember and Malang in Sets 1 and 2.



Figure 1. Receive Comparison Chart Final Double Event POMPROV EAST JAVA 2023

The comparison between Jember and Malang reveals that Jember had a higher receive success rate in both sets. In Set 1, Jember achieved 100%, while Malang recorded 92.31%. Similarly, in Set 2, Jember

ISSN : 2477-3379 (Online) ISSN : 2548-7833 (Print)

maintained the lead with 93.75%, compared to Malang's 90.56%. These results indicate that Jember demonstrated greater consistency and accuracy in receiving. The results of the analysis can determine the success or failure of the receiving technique in both teams, namely Malang and Jember.

DISCUSSION

Based on the research results, it shows that the received analysis in the final double event match Sepak Takraw POMPROV East Java 2023 shows that the percentage of successful receptions by Jember is higher compared to that of Malang. The results of this analysis can determine the success and failure of the sepak takraw receiving technique. Receive analysis is very important in sports (Sarmento et al., 2014; Martins et al., 2021). This is because it is part of the ongoing process to achieve success and progress in sports achievements (Da Silva Lima et al., 2023). This shows that receiving analysis in a match is important. Therefore, it is important that a coach can see the players 'ability to evaluate in matches. This process relies on the underlying forecast model to combine different observations in a physically consistent manner, allowing the creation of grid-shaped datasets for various variables, including those that are rarely or even not directly observed (Gelaro et al., 2017).

The findings of this study show that the analysis of receives allows for the identification of both successful and unsuccessful techniques. A successful receive serves as a defensive tactic in sepak takraw, acting as both a defense and the starting point for an offensive play. It also marks the initiation of a counterattack (Ramadhan & Bulqini, 2018). Jember's high receive percentage is likely due to accurate control by the Jember team so that they can receive successfully. A strong receive ensures that the ball is accurately controlled after an opponent's serve, giving the team the opportunity to launch an immediate attack (Moh. Hanafi, 2020).

On the other hand, a failed reception can squander offensive chances and even result in a point loss (Yuliarti & Bulqini, 2021). Through analysis, coaches can assess the quality of a player's reception, enhance

their technique, and improve overall consistency in gameplay (Ramadhan & Bulqini, 2018). It also helps pinpoint technical mistakes, such as improper body positioning or delayed reactions, and correcting these can reduce errors and increase the likelihood of success. Additionally, a solid receiving technique is essential for devising effective game strategies, particularly against opponents with powerful serves, allowing teams to adapt their tactics accordingly (Prasetyo et al., 2024; Ramadhan & Bulqini, 2018). Analyzing the receiving technique in Sepak Takraw is crucial because it is fundamental in initiating attacks and maintaining the team's positioning (Yudanto et al., 2024). Finally, this analysis also gauges the mental and physical readiness of players in handling the pressure of receiving an opponent's serve, which is vital for boosting player endurance and focus throughout the match.

An analysis of the final double event match between the Jember and Malang teams at the 2023 East Java POMPROV reveals that the effectiveness of the receive technique had a considerable impact on the outcome of the game. The Jember team demonstrated consistent performance in receiving serves, with a high success rate across all sets, indicating strong control over the first ball, an essential element for initiating successful attacks. In contrast, the Malang team faced several difficulties handling serves, particularly during critical points, which led to the loss of valuable opportunities. Most of these errors stemmed from improper body positioning and delayed reactions to the ball's trajectory. These shortcomings illustrate how weaknesses in receiving can significantly disrupt overall team performance (Roszani et al., 2023).

One of the important aspects that determines the course of the match is the ability to receive or pass the ball (Fatimah & Yudanto, 2022). Good receiving technique can give the team an advantage in building attacks and maintaining the game's rhythm (Moh. Hanafi, 2020). The analysis of ball reception techniques in the final double event match between Jember and Malang at the 2023 East Java POMPROV highlights the significant influence of receiving skills on the game's flow. The

ISSN : 2477-3379 (Online) ISSN : 2548-7833 (Print)

effectiveness of ball reception in this match was largely shaped by the players' physical preparedness, tactical planning, and teamwork in coordinating responses to the opponent's serves (Ramadhan & Bulqini, 2018). This research presents several limitations that must be acknowledged. Firstly, the study focused solely on a single match, the final double event between Jember and Malang at the 2023 East Java POMPROV, so the findings may not reflect broader trends or generalize to national or international contexts. Secondly, the data was collected from publicly available video footage (e.g., YouTube), which may have limitations in clarity and camera angles, potentially affecting the accuracy of technical observations. Thirdly, the scope of this study was limited to the analysis of receive techniques without considering additional influential factors such as players' physical condition, psychological readiness, or overall team tactics.

Additionally, including only two teams narrows the ability to generalize the outcomes to other Sepak Takraw squads. Future research should involve a wider range of matches across different levels, regional, national, and international, to capture a more comprehensive view. Including preliminary and semifinal rounds would allow for analysis of performance consistency throughout tournaments. Moreover, expanding the focus to explore the relationship between receive and other elements such as service, smash, and block could provide a more holistic understanding of match dynamics. Integrating advanced video analysis tools and conducting interviews with coaches and players are also recommended to enhance data precision and offer deeper insights into strategic execution. Such approaches would contribute to richer findings and support the advancement of more structured and data-informed Sepak Takraw training methods.

CONCLUSION

The conclusion of this study is that the received analysis in the final double event match sepak takraw Pomprov East Java 2023 is higher in Jember than in Jember. This method can be applied as an evaluation

strategy to improve the quality of athletes' play in the future. Apart from that, it also provides insight to coaches regarding acceptance analysis so that it can be a reference for the success of the next match. The findings from this study have valuable implications for improving basic training techniques in Sepak Takraw, particularly in the area of ball reception. Insights into each team's success and failure in receiving the ball can guide coaches in designing more targeted and evidence-based training programs aimed at enhancing consistency and accuracy under competitive conditions. For athletes, this research highlights the critical role of reception skills as a starting point for building effective offensive strategies. In sports education and coaching, these results can be applied as instructional resources or used for technical evaluations. Furthermore, the study supports broader adoption of video-assisted performance analysis to help elevate match quality and athlete development.

REFERENCES

- Andreanto, A., Apriliyanto, R., & Sulaiman, A. (2024). Analisis Video Pertandingan Persebaya Football Club pada BRI Liga 1 2021. SPARTA, 6(2), 41–44. https://doi.org/10.35438/sparta.v6i2.248
- Budiman, D., & Rusdiana, A. (2019). Analisis Permainan Bola Voli Pada Putaran Final Four Proliga Tahun 2017 Berbasis Video Recorder. Jurnal Terapan Ilmu Keolahrgaan, 4(1), 55–59. https://doi.org/10.17509/jtikor.v4i1.10126
- Da Silva Lima, V., Rocha, F. B. F., Diniz, I. B., García-De-Alcaraz, A., Palao, J. M., de Conti Teixeira Costa, G., Mesquita, I., Medeiros, A. I. A., & Batista, G. R. (2023). Status of Match Analysis Research in Indoor and Beach Volleyball: A bibliometric analysis. *Retos*, *50*, 838–848. https://doi.org/10.47197/retos.v50.100039
- Dwiansyah, M. S. R., & Hakim, A. A. (2021). Analisis Keterampilan Inter Regu Putra Pada Pertandingan Final Sepak Takraw Asian Games. *Jurnal Kesehatan Olahraga*, 09(02), 1–6. 2338-8005.
- Fatimah, F. A., & Yudanto. (2022). Hubungan Koordinasi Mata-Kaki dan Kelincahan dengan Keterampilan Penerimaan Bola Pertama pada Peserta Ekstrakurikuler Sepak Takraw Sekolah Menengah Pertama di Kabupaten Bantul. *Jendela Olahraga*, 7(2), 2022–2028. https://doi.org/10.26877/jo.v6i1.6225
- Firdaus, M. A. R., & Muhammad. (2024). Analisis Pertandingan Bolavoli Antara Lavani vs BIN Pasundan Pada Grand Final Livoli Divisi

ISSN : 2477-3379 (Online) ISSN : 2548-7833 (Print)

- Utama Tahun 2023. *JPO: Jurnal Prestasi Olahraga*, 7(4), 303–311. 2338-7971.
- Gelaro, R., McCarty, W., Suárez, M. J., Todling, R., Molod, A., Takacs, L., Randles, C. A., Darmenov, A., Bosilovich, M. G., Reichle, R., Wargan, K., Coy, L., Cullather, R., Draper, C., Akella, S., Buchard, V., Conaty, A., da Silva, A. M., Gu, W., ... Zhao, B. (2017). The modern-era retrospective analysis for research and applications, version 2 (MERRA-2). *Journal of Climate*, *30*(14), 5419–5454. https://doi.org/10.1175/JCLI-D-16-0758.1
- Martins, J. B., Afonso, J., Coutinho, P., Fernandes, R., & Mesquita, I. (2021). The Attack in Volleyball from the Perspective of Social Network Analysis: Refining Match Analysis through Interconnectivity and Composite of Variables. *Montenegrin Journal of Sports Science and Medicine*, 10(1), 45–54. https://doi.org/10.26773/mjssm.210307
- Moh. Hanafi. (2020). Efek Metode Passing dengan Tembok Terhadap Peningkatan Receive dalam Permainan Sepak Takraw. *Jurnal Pendidikan Kesehatan Rekreasi*, *6*(1), 44–49. https://doi.org/10.5281/zenodo.3661573
- Ningsih, Y. F., Utomo, A. W., & Arafat, H. F. (2023). Analisis Serangan Permainan Bolavoli (Studi Pada Tim Putra Kabupaten Magetan, Kejurprov Bolavoli Junior Jawa Timur Tahun 2022). *Jurnal Kejaora (Kesehatan Jasmani Dan Olah Raga)*, 8(1), 103–110. https://doi.org/10.36526/kejaora.v8i1.2704
- Padli, Kiram, Y., Sin, T. H., Iyakrus, Azidin, R. M. F. R., Denay, N., & Rudyanto. (2023). Evaluation of the sepak takraw training program in the Student Sports Education and Training Center (SSETC). *Journal of Physical Education and Sport*, 23(12), 3332–3340. https://doi.org/10.7752/jpes.2023.12381
- Pea, A. A. H., Piri, N., & Lolowang, D. M. (2024). Pengaruh Gaya Mengajar Dan Motor Educability Terhadap Keterampilan Sepak Sila Dalam Permainan Sepak Takraw Mahasiswa Jurusan Pendidikan Olahraga FIKKM Unima. *Olympus: Jurnal Pendidikan Kesehatan Dan Rekreasi UNIMA*, 05(01), 10–17. 2774- 6917.
- Piri, N., & Makadada, F. A. (2024). The Influence of Lemb Muscle Strength on Smash Ability in The Game of Sepak Takraw in Students Coaching Education Department. *European Journal of Research Development and Sustainability*, 5(01), 35–40. https://www.scholarzest.com. 2660-5570.
- Prasetyo, V. E., Kusuma, D. W. Y., & Hanani, E. S. (2024). Analysis of Athletes' Techniques and Strategies in Sepak Takraw Matches in Double Event Numbers (Case Study Of Pre PON Sepak Takraw Region III 2023). *Journal of Physical Education and Sports, 13(1), 22-28.* 2252-648X.

- Prastyana, B. R. (2020). Analisis Hasil Pertandingan Pencak Silat Pada Kejuaraan DANDIM CUP III Kabupaten Nganjuk Tahun 2019. *STAND*, 1(1), 9–16. https://doi.org/10.36456/j-stand.v1i1.2367
- Ramadhan, A., & Bulqini, A. (2018). Analisis Receive Pada Pertandingan Final Sepak Takraw POMDA Jatim 2017. *Journal of Sport and Exercise Science*, 1(1), 13–19. https://doi.org/10.26740/jses.v1n1.p13-19
- Romadona, R. P., Widodo, A., Wahyudi, H., & Firmansyah, A. (2022). Analisis Faktor Penentu Kemenangan Atlet Cabang Olahraga Pencak Silat Kategori Tanding (Analisis Video Hasil Pertandingan Babak Final Kejuaraan Internasional Kelas Berbeda Usia Dewasa). *Indonesian Journal of Kinanthropology (IJOK)*, 2(1), 29–37. https://doi.org/10.26740/ijok.v2n1.p29-37
- Roszani, M. A. A., Zainuddin, N. F., Aznan, E. A. M., Jamaludin, M., Ismail, Z., & Miswan, M. S. (2023). Analysis of Spiking Technique towards Point Distribution Succession in Sepak Takraw League (STL) Champions Cup 2021. *Journal of Human Centered Technology*, 2(1), 68–72. https://doi.org/10.11113/humentech.v2n1.43
- Rusli. (2022). Hubungan power otot tungkai dengan kemampuan servis atas permainan sepak takraw. *Jurnal Eduscience*, 9(1), 204–213. https://doi.org/10.36987/jes.v9i1.2615
- Sarmento, H., Marcelino, R., Anguera, M. T., CampaniÇo, J., Matos, N., & LeitÃo, J. C. (2014). Match analysis in football: a systematic review. *Journal of Sports Sciences*, 32(20), 1831–1843. https://doi.org/10.1080/02640414.2014.898852
- Siedlecki, S. L. (2020). Understanding Descriptive Research Designs and Methods. *Clinical Nurse Specialist*, 34(1), 8–12. https://doi.org/10.1097/NUR.0000000000000493
- Simanjuntak, V., & Maksum, H. (2021). Improving the results of triple jump exerciseusing image and video media. *Jurnal SPORTIF: Jurnal Penelitian Pembelajaran*, 7(2), 317–332. https://doi.org/10.29407/js_unpgri.v7i2.16384
- Wiwik. (2020). Sepaktakraw smash training model based on training aids tool. *PENDIPA Journal of Science Education*, *4*(2), 6–13. https://doi.org/10.33369/pendipa.4.2.6-13
- Yudanto, Yuliarto, H., Sudardiyono, Sujarwo, Ali, S. K. S., K., M. K., & Pratama, K. W. (2024). The Effect of Training Method and Coordination on First Ball Receiving Skills in Sepaktakraw. *Retos*, 55, 596–602. https://doi.org/10.47197/retos.v55.101334
- Yuliarti. (2021). Analisis Receive Pada Pertandingan Final Double Event Sepak Takraw Jawa Timur Vs Sumatra Barat POPNAS 2019. *Jurnal Prestasi Olahraga: Evaluation Athlete Performance*, *4*(11), 6–10. 2338–7971.