



Movement Analysis of Fundamental Forehand and Backhand Tennis Techniques for Athletes at the Sekadau Regency PELTI Introductory Tennis Club

 <https://doi.org/inspiree.v5i03.133>

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ABSTRACT

ARTICLE INFO

The purpose of the study. The objective of this study is to assess the fundamental forehand and backhand tennis movement competencies for beginner PLTI tennis players in the Sekadau district.

Materials and methods. The study utilized observation, interviews, and questionnaires as primary data sources. Secondary data included documentation and training session attendance records. Triangulation was employed in data collection through observation, interviews, and questionnaires. Data analysis adhered to Miles and Huberman's interactive model, involving data collection, reduction, presentation, and conclusion drawing. Observational data revealed athletes' deficiencies in foot and hand positioning during racket swings. Interviews indicated that training processes were hindered by issues such as non-standard balls, management difficulties, and athlete distractibility.

Results. The questionnaire results revealed insufficient performance by athletes, especially in question 7 about foot positioning in forehand and backhand techniques. Thus, the data imply a lack of fundamental proficiency in forehand and backhand technical movements among PELTI tennis court athletes at Sekadau Regency Beginners.

Conclusions. The examination of Forehand and Backhand competencies in Field Tennis for PELTI novice athletes in Sekadau district is inadequate. Observational and interview findings reveal subpar performance metrics. Numerous athletes attain scores that are deemed insufficient and unsatisfactory.

Keywords: *Tennis Techniques for Athletes; Movement Analysis; Basic Forehand and Backhand.*



Article History:

Received: June 27, 2024

Accepted: September 06, 2023

Published: September 27, 2024

INTRODUCTION

Tennis constitutes a highly esteemed athletic endeavor, given its substantial popularity among the general populace (Agustiyanto, 2023). The fundamental tenet of tennis play involves striking the ball prior to or subsequent to its rebound on the surface or court, propelling it over the net and into the adversary's designated playing area (Fu et al., 2018). Tennis represents a competitive sport that employs a diminutive

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^{abcde}Authors'Contribution: a-Study design; b-Data collection; c-Statistical analysis; d-Manuscript preparation; e-Funds collection.



spherical object and a racket as the implement for ball propulsion. This activity is conducted on a rectangular playing surface constructed from materials such as cement, a composite of soil and fine sand (gravel), and can also be performed on grass (Sports Of The Olympic Games, 2014). The tennis court is delineated into two distinct halves by means of a net serving as a boundary. This phenomenon is attributable to the proliferation of tennis clubs within various locales, in addition to the recent trend of constructing numerous tennis courts across Indonesia. In terms of the accomplishments attained by national tennis athletes at both regional and international tiers, there remains a significant gap between current performance and aspirational benchmarks (Liu, 2014). Consequently, this sport warrants considerable focus to enhance its overall development, particularly in relation to achievement advancement, enabling representation on both national and international platforms. Undoubtedly, the attainment of optimal performance in tennis can be facilitated through the professional mentorship of a coach who must acquire, comprehend, and adeptly implement an array of strategies and training methodologies.

The formulation of a planning strategy, which encompasses a sequence of activities aimed at attaining specific training or educational objectives, constitutes an effective training process (Sim & Sands, 1989)(Abraham et al., 2006). Naturally, the implementation of training methodologies is imperative for the realization of training aims. The efficacy of the training methodology employed is directly proportional to its appropriateness, thereby facilitating the attainment of training objectives. In this context, the contributions of both the coach and the athlete's parents are equally pivotal and share a collective responsibility in the pursuit of achievements (Hellstedt, 1987)(Hirschhorn & Loughead, 2000). The processes of coaching and developmental strategies necessitate a scientific framework, which should be underpinned by thorough examination and analysis of movement, complemented by suitable infrastructure and training methodologies (Segwaba et al., 2014). It is anticipated that the utilization of appropriate models, methodologies, and analytical perspectives within the training regimen will serve as a metric for success and achievement.



Achievements within the domain of field tennis can indeed be evaluated through the demonstration of proficient and accurate fundamental strokes, which represent a crucial foundation for enhancing tennis playing capabilities (Fernandez-Fernández et al., 2014). For athletes engaged in field tennis, the acquisition of fundamental striking techniques is essential for the elevation of performance levels. The attainment of foundational techniques can be realized through systematic, precise, and consistent study or practice (Reid et al., 2007). (Sukadyanto, 2011) posits that the sport of tennis possesses distinct characteristics that differentiate it from other athletic endeavors. The essence of an effective hitting technique is derived from the correct positioning and timing employed during ball impact. To achieve hitting outcomes that are effective, precise, and challenging for one's opponent, it is vital to maintain concentration during ball striking, ensuring that the moment of racket contact with the ball occurs at the optimal time and position.

The fundamental techniques involved in the game of tennis, as articulated by (Agus, 2015), encompass forehand strokes, backhand strokes, serves, smash strokes, and volleys. For players to achieve proficiency and correctness in tennis, it is imperative that they attain mastery over these foundational techniques. The attainment of adeptness in tennis is contingent upon players being well-versed in fundamental techniques. Athletes possessing strong foundational skills are more likely to excel in the sport of tennis. According to (Rex, 2013), tennis serves as an avenue for instilling proper etiquette, fostering a highly constructive mentality, and cultivating respect for established regulations. The demand for tennis courts has escalated due to the burgeoning interest among various demographics, including children, adolescents, and adults. This trend is evidenced by the proliferation of tennis clubs across different locales, including districts such as West Kalimantan, where the construction of new tennis courts has become increasingly prevalent. The PELTI Beginner Tennis Club represents one such institution in Sekadau Regency, operating under the auspices of both PELTI and KONI Sekadau Regency, with its establishment dating back to 2017.



The athletes affiliated with this tennis club predominantly comprise children and students enrolled in educational institutions ranging from elementary to secondary levels, as well as individuals pursuing general education (Zhou & Shen, 2022)(Sokur et al., 2018). Preliminary investigations and interviews conducted by the researchers with coaches at the PELTI Beginner Tennis Club yielded insights indicating that numerous athletes struggle to effectively master the fundamental techniques of tennis, particularly the forehand and backhand strokes. Furthermore, the inadequacy of training facilities and infrastructure presents a significant obstacle, as evidenced by the researchers' observations of insufficient equipment availability, including numerous deflated balls, deteriorating ball baskets, rackets that fail to adequately meet athletes' requirements, and a lack of apparatus to facilitate ball throwing. Such deficiencies contribute to a diminished efficiency in training sessions (Kovacs, 2006)(Strength and Conditioning for Netball: A Needs Analysis, 2022). A particularly pressing issue identified during the researchers' observations and discussions with the trainer at the Sekadau Regency PELTI Beginner Tennis Club pertains to the challenges encountered in learning the essential technical movements related to forehand and backhand strokes. During the training regimen, a considerable number of athletes have yet to grasp the theoretical foundations and practice methodologies in accordance with the established rules of tennis, resulting in suboptimal execution of basic movements and techniques associated with forehand and backhand strokes. In light of these issues, as corroborated by interview responses and observational data, the researchers resolved to undertake an investigative study centered on the "Analysis of the Basic Forehand and Backhand Techniques of Field Tennis among beginner athletes at the PELTI Beginner Tennis Club, Sekadau Regency".

MATERIALS AND METHODS

Study participants

In-depth interviews were performed with seven students and one coach at the PELTI Beginner Tennis Club located in Sekadau Regency. The research employed a multiple-choice questionnaire focused on fundamental Tennis Forehand and Backhand movements.



Study Organization

The objective of elucidating phenomena that manifest, which generates descriptive data or articulate expressions in written or spoken forms by individuals, along with observable behaviors that are not derived from other sources, Moha, I. (2019). Conversely, this investigation aspires to elucidate phenomena that manifest and theoretical frameworks grounded in data procured from empirical observations, Anggito, A., & Setiawan, J. (2018).

Test and measurement procedures

Through the application of statistical methodologies or alternative calculation techniques, qualitative research endeavors to (1) characterize the research subject (characterizing the subject). This characterization may be conducted on subjects encompassing events, social interactions, social religious practices, and similar phenomena. (2) elucidating the significance underlying the phenomenon (investigating the significance underlying the phenomenon) can be achieved if the researcher delves beneath the surface of what is displayed, articulated, and unveiled through comprehensive interviews and participatory observation. (3) elucidating the phenomenon that transpires (elucidating the subject) constitutes the crux of the inquiry or, in other words, what manifests as divergent from the primary. The methodologies for data collection employed in this investigation comprise: Observation, Interview, and Questionnaire. In this inquiry, the researchers engaged in observational assessments utilizing tests. The tests are designed to ascertain the proficiency in executing fundamental forehand and backhand tennis techniques. Interviews conducted in the form of inquiries with athletes and coaches take place directly in the field. Subsequently, the researcher meticulously documented the information articulated by the athletes and coaches.

RESULTS

The empirical data pertaining to the performance metrics of field tennis forehand and backhand maneuvers at the Sekadau Regency PELTI Beginner Tennis Club, collected during the observational period, revealed the presence of athletes exhibiting suboptimal stroke scores or points. This information was derived from the outcomes



of the field tennis forehand and backhand stroke assessment. The conversion methodology for the testing instrument, as delineated by (Nurhasan, 2001), is encapsulated in Table 1.

Table 1. Results of Athletes' Forhand Observation Test Scores

No	Sub Achievements/hitting criteria	Number of athletes
1.	Very well	4 athlete
2	Good	10 athlete
3	Enough	6 athlete
4	Not enough	2 athlete
Quantity		21 athlete

Table 2. Results of the Athlete's Backhand Observation Test

No	Sub Achievements/hitting criteria	Number of athletes
1.	Very well	2 athlete
2	Good	8 athlete
3	Enough	9 athlete
4	Not enough	2 athlete
Quantity		21 athlete

Based on the findings derived from the administered questionnaire, quantitative scores were extracted from the responses provided by the athletes and subsequently transformed into a completion scale in accordance with the principles of Curriculum 13 theory utilizing the multi KKM Minimum completeness criteria) interval model, as delineated below:

Table 3. Results of Athlete Questionnaire Scores

No	Sub Achievement/criteria	Number of athletes	Percentage
1.	Athletes who get a score above KKM 75	12 athlete	57 %
2	Athletes who get a score below the KKM 75	10 athlete	47 %
Quantity		21 athlete	100%

DISCUSSION

The findings derived from the assessments conducted at the Sekadau Regency PELTI Beginner Tennis Club indicate that during the execution of Forehand and Backhand stroke evaluations on the tennis club's athletes, a substantial number of these athletes have yet to adequately master the fundamental movements associated with these strokes (Pane et al., 2020) (Syahputra et al., 2020). Moreover, numerous athletes exhibited improper techniques, particularly regarding their footwork, hand positioning during racket swings, and overall body alignment (Elliott, 2006) (Kuo et al., 2022). An analysis of the observational data permits the researchers to deduce that a considerable proportion of athletes remain unskilled in executing the essential



forehand and backhand techniques pertinent to court tennis, thereby resulting in suboptimal stroke performance (Mechanics and Learning Practices Associated with the Tennis Forehand: A Review, 2013). Furthermore, interviews conducted with seven research subjects concerning the demeanor of the trainer during practice sessions reveal that the athletes at the Sekadau Regency PELTI Beginner Tennis Club possess the capability to manage behavioral issues that adversely affect the training process. Additionally, the coach demonstrates a commendable level of assertiveness, successfully fostering a conducive learning environment that incorporates elements of levity, thus eliciting laughter from the athletes (Smoll et al., 1978). A professional coach is obligated to endeavor to ensure the success of the training process, with one integral aspect being the cultivation and enhancement of creativity as a means to address challenges and facilitate a productive and high-quality training experience, particularly for coaches involved in field tennis (Sackett & Gano-Overway, 2017), thereby promoting greater engagement among athletes in training sessions at the Sekadau Regency PELTI Beginner Tennis Club. In light of the research outcomes and theoretical analyses, it can be concluded that while coaches have made strides in managing athlete behavior, the effectiveness of such management remains suboptimal; nonetheless, coaches have been proficient in optimizing the utilization of field conditions for training purposes.

The findings derived from interviews conducted with athletes indicate that a notable proportion of these individuals exhibit a lack of discipline, engage in playful behavior during instructional sessions, and some students continue to struggle with the regulation of their conduct (Battaglia et al., 2016). This manifestation of athlete behavior serves to hinder the achievement of objectives within the training paradigm (Harris-Reeves et al., 2013). Nonetheless, it is pertinent to note that there exist athletes who demonstrate indifference towards their coaches (Stier, 1983). The determinants of athlete behavior are influenced by various factors, including familial settings, peer interactions, and educational contexts (Shiddiq et al., 2023). Analysis of the results



reveals that the majority of athletes scored below the Minimum Completeness Criteria (Bartholomew et al., 2009) (KKM), with only 10 individuals achieving scores beneath this benchmark, while 12 athletes attained scores exceeding the KKM. Furthermore, data collected from the questionnaire indicated that students exhibited difficulty in responding to question number 7, which pertains to the appropriate foot placement during the execution of forehand and backhand techniques (Hennis, 1956). Through inquiries posed to athletes regarding the fundamental aspects of tennis, specifically concerning basic forehand and backhand techniques, the researchers provided elucidations during the training sessions (Burrus-Bammel, 1976). Among the 21 PELTI Beginner Tennis Clubs located in Sekadau Regency, no athletes were able to accurately and clearly respond to all posed questions. Given that the maximum score attainable on the questionnaire is 100, the athletes managed to achieve an average score of only 80 (Susanto & Lestari, 2020). In light of the aforementioned discussion, it can be inferred that the questionnaire scores of the PELTI Beginner Tennis Club athletes in Sekadau Regency reflect an inability to provide correct answers. An additional impediment is posed by athletes who fail to heed explanations or remain attentive during the coaches' presentations of training content in the field.

CONCLUSION

Based on empirical research conducted by scholars who specialize in the fundamental Forehand and Backhand movement competencies of Field Tennis among athletes at the PELTI Tennis Club for Beginners in Sekadau Regency, it has been determined that these competencies are not functioning at an optimal level. The outcomes from observations, interviews, and questionnaire analyses collectively yield suboptimal data, indicating that a significant number of athletes are exhibiting low performance grades. The fundamental Forehand and Backhand tennis movement capabilities of the athletes at the Sekadau Regency PELTI Beginner Tennis Club are deemed inadequate, as evidenced by observational data revealing that numerous athletes have not yet mastered the essential footwork and handgrip techniques necessary for executing forehand and backhand strokes effectively. Furthermore,



insights gleaned from interviews suggest that there exists a deficiency in the availability of facilities conducive to practicing fundamental tennis court movements during the training process. Additionally, instances of athlete misconduct serve as another impediment to achieving training objectives. From the perspective of the coach, there remains a lack of optimal engagement in analyzing the factors that inhibit the maximization of athletes' capabilities. Moreover, the feedback obtained from the questionnaire indicates that athletes continue to struggle with accurately responding to the posed questions.

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APPENDIX

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