

# Strategic Role of Libero in Improving Team Performance in Volleyball: A Literature Review

Robi Alfaini<sup>1</sup>, Soni Sulistyarto<sup>2</sup>, Achmad Widodo<sup>3</sup>, Muhammad Arja Bahauddin<sup>4</sup>

<sup>1,2,3,4</sup> Universitas Negeri Surabaya, Jl. Rektorat Unesa, Lidah Wetan, Kec. Lakarsantri, 60213, Indonesia

Correspondence: [ahmad.23002@mhs.unesa.ac.id](mailto:ahmad.23002@mhs.unesa.ac.id)

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## ABSTRACT

**Background:** The purpose of this study was to determine how a libero contributes to a team during a volleyball match. The method used was a literature review. Literature searches were conducted through the Google Scholar database, focusing on articles published between 2020 and 2025. The keywords used were contribution, libero, and volleyball.

**Methods:** The article screening process for this literature review followed the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines. A total of 333 articles were initially identified and then filtered according to the inclusion criteria: (1) international articles published in English, and (2) articles accessible online and available for download. After screening, 94 articles related to the libero's contribution to volleyball matches were selected for further review. Ultimately, 8 articles met all eligibility criteria and were included in the study.

**Results:** The findings of this literature review indicate that liberos possess valuable and highly effective skills that contribute significantly to team performance. These skills include high-quality serve reception, setting as a secondary setter, and strong defensive abilities. These elements are essential in volleyball because they help maintain the balance between offense and defense and enhance the competitiveness of the game.

**Conclusion:** The libero plays a crucial role in volleyball by providing effective serve reception, acting as a secondary setter when necessary, and contributing strong defensive performance. These skills support the balance between attack and defense, thereby improving overall team performance and making matches more competitive.

**Keywords:** Volleyball Performance, Libero Performance, Volleyball Skills.

## 1. Background

Volleyball at the international level is governed by the Federation Internationale de Volleyball (FIVB), founded in 1947 and headquartered in Lausanne, Switzerland, and first competed at the world level in 1949 in Prague, Czechoslovakia. Volleyball is a team sport that demands effective attack and defense techniques (Sukri, 2019). Research shows that teams with good defense are more likely to win the set. This suggests that defensive effectiveness can determine a team's success or failure (Marcelino, Mesquita, Sampaio, & Moraes, 2010). In the defensive phase, the main goal is to receive, dampen, or neutralize the opponent's attack to enable optimal counterattacks, which can lead to points. This implementation process is very complex, including blocking, field defense, counterattack, and counterattack range (Silva et al., 2014).

A good defense is certainly inseparable from the duties of one of the players who has the greatest responsibility or as a leader in defense, namely a libero (defensive specialist). The libero's task is very large in the defensive phase compared to other players (Rentero, et al: 2015). The libero is one of the key players in the effort to attack and defend. The presence of a libero is expected to develop defensive patterns and capabilities and optimize the team's attack range (Mesquita, et al: 2007). Sanchez, M., et al. (2019) said that when initially introduced liberos only participated in defense, but over time liberos were introduced as players who not only participate in the defensive phase, but also in the offensive phase, namely in receiving serves (receive serve). Specifically, the presence of a libero aims to balance the dominance of attack and defense (Castro et al., 2011), this opinion is supported by research by Rentero, L., et al. (2015) that Libero dominates in increasing the effectiveness of attack and defense. Sanchez, M., et al (2019) proved in their research that in receive serve or defense opportunities where the libero defends, it more often results in a perfect defense, and when the first ball is received by the libero it is very possible to have more attack options (Lima, R. P. et. al., 2008).

Various studies have been conducted to confirm this (Rentero et al., 2015). These studies indicate that the libero influences reception more than defense. As developments progress, teams can now employ two liberos: a libero specializing in receiving and serving, and a libero specializing in defense. This can significantly strengthen the team's defense and serve. The libero plays a significant role in delivering effective receive, serve, dig, cover, and toss. However, to fully understand a libero's contribution to a match, a thorough analysis using a literature review is required.

## 2. Methods

A literature search was conducted through the Google Scholar database. The keywords used to find the articles for review were "contribution" AND "libero" AND "volleyball." The search was limited to the years 2020 to 2025. The search results from the Google Scholar database yielded 333 articles. The next step was screening. The article screening process in writing this literature review uses the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) literature search extension. PRISMA is a reporting format for systematic reviews and meta-analyses. The literature search informs not only the results of the systematic review but also the underlying process that determines the data available for analysis. Additional components of the systematic review process, such as screening, data extraction, and qualitative or quantitative synthesis procedures, depend on the identification of eligible studies. Therefore, the literature search must be designed to be robust and reproducible to ensure the minimization of bias (Rethlefsen et al., 2021).

A total of 333 articles were found and were narrowed down to become discussion topics according to the following criteria: (1) International articles, (2) Articles that can be accessed online or downloaded. Ninety-four articles underwent screening, namely those related to the libero's contribution to a match. After screening, eight articles were obtained which were then used as discussion topics. Detailed data can be seen in Figure 1.

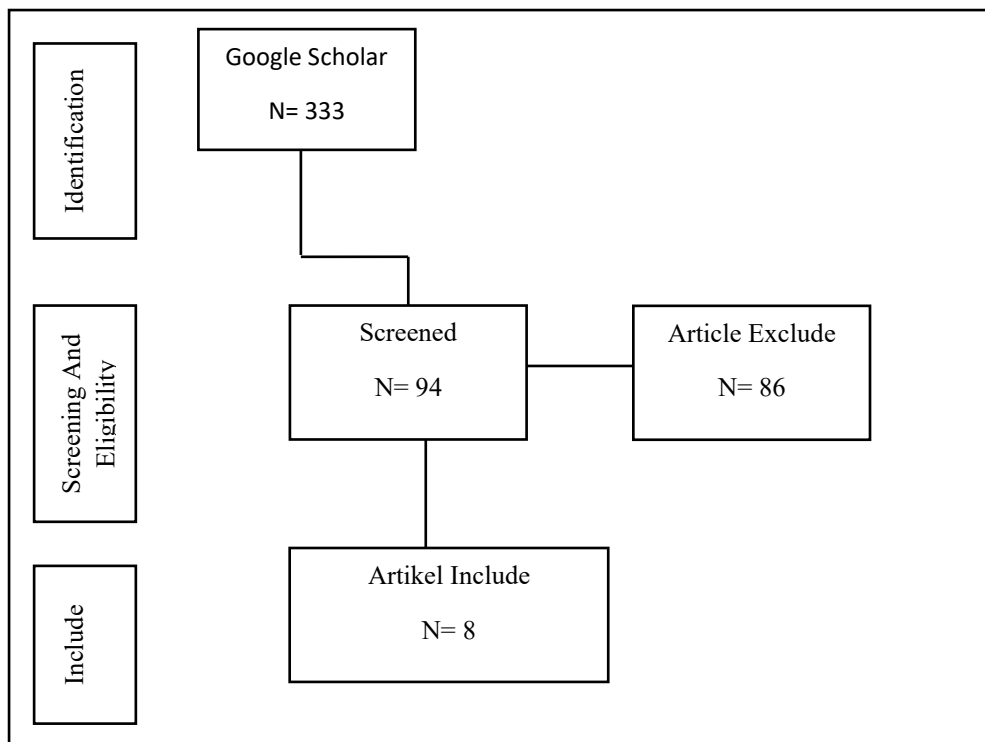


Fig 1. Literature Review Search Method

### 3. Results

Table 1. Literature Review

No	Title	Year	Journal	Conclusion
1	Service Reception Efficiency of the Romanian National Volleyball Team in the CEV European Silver League 2022	2025	Revista Romaneasca Pentru Education Multidimensionala	The results showed that, in general, the self-efficacy dimensions and global self-efficacy in volleyball discriminated the athletes according to their positions. Differences in three dimensions were highlighted: Dimension 1, Self-Efficacy in the Game; Dimension 2, Defensive SelfEfficacy in Volleyball; and Dimension 3, Offensive Self-Efficacy in Volleyball. In D1, higher self-efficacy values were observed in the setters; in D2, higher self-efficacy values were observed in the liberos; and in D3, higher self-efficacy values were observed in the attackers, mainly opposite hitters.
2	Reception-Attack Transition in Volleyball: Analysis of Spike Effectivness	2022	Educació Física i Esports	Spiking performance is at its maximum when there is no transition from the front receive. Spiking performance decreases after the front receive (transition occurs).
3	Research Regarding Reception Parameter in Volleyball at the Libero Position, Using Software Programs For Statistical Analyse	2021	In Conference proceedings of» eLearning and Software Education for	The importance of statistical analysis using software programs & Analyzing the efficiency of two liberos on the receive serve parameter

4	Use of the Technique of Improving the Second Set of the Ball in the Preparation of Player "Libero" Player	2021	In Modern University Sport Science	The libero must be fluent in all types of setups, both front and back underpasses and front and back overpasses, because in the game there are often relationships between defensive players involved in the attacking phase, namely the defensive players setting up the ball from the defense.
5	Technical Performance Analyses of Volleyball Players Using Volleyball Information System	2020	Malaysian Journal of Movement, Health & Exercise,	Digging is one of the main tasks of a libero, although other players can also dig. Smart players will not deliberately direct attacks towards the libero because it will reduce the chances of success of the attack.
6	Predictors Of The Reception Efficacy In Men's World Volleyball U-21 And Absolut	2021	International Journal of Medicine & Science of Physical Activity & Sport/Revista Internacional de Medicina y Ciencias de la Actividad Física y del Deporte	Logistic regression analysis showed that previous displacement of the receiver and reception technique were predictors of reception efficacy in both categories, U-21 and senior. Type of reception and reception zone were predictors of efficacy in the U-21 category, but not the senior category. Receiver position was predictive of efficacy uniquely for the senior.
7	La Defensa Y El Libero En El Voleibol	2024	Universidad Nacional de Educación Enrique Guzmán y Valle	Their role is to cover the spaces behind the other defenders and improve the team's defense in general." "In 1998, with the introduction of this new player, the team's defensive potential increased, as he is a specialist in defending and receiving the ball. Thus, the libero was an influential figure in the defensive phase, as well as in the attacking phase, by favoring the libero in reception
8	Study On Defense Efficiency In Senior Volleyball Teams	2021	Ovidius Univ. Ann. Ser. Phys. Educ. Sport Sci. Mov. Health,	This study is the first step in developing a technical-tactical performance model of the relationship between blocking and taking over the attack. The higher the efficiency of the defense in attack, the higher the points of attack after defense

#### 4. Discussion

This study examines the contribution of a libero (a defensive specialist) to a volleyball match, both in terms of effectiveness and tactics. The libero is the player with the greatest responsibility in the team's defense; in this sense, it can be said that the libero is a defensive specialist. The libero is a specialized player who has the freedom to enter and exit the court without the limitations of substitutions like other players. Liberos are usually identified by wearing a different jersey from their teammates. According to Marghes, P.E. & Gradinaru, S. (2014), the libero comes from the conversion of a spiker. Knowing that in volleyball, height is a crucial factor in volleyball performance, it is advisable for a short spiker to become a libero. Sujarwo (2020) stated that the libero is a key player in building attacks and defending.

The use of a libero is very useful for improving and optimizing defensive capabilities without having to worry about player rotation. The presence of a libero is optional and must be viewed from a specific perspective (Gradinaru et al., 2010). However, most volleyball teams find that using a libero has a beneficial effect on the outcome of the game. This is evident in the fact that the Portuguese team is one of the most positive teams

because it prioritizes a libero as the first receiver (receiver) (Joao, P. V. et al., 2006). With a thorough understanding of the libero's role, duties, position, and function, teams can utilize their presence effectively in both the defensive and offensive phases to achieve success in the game.

## 5. Conclusions

The explanation above shows that libero has useful and very effective skill components for the team, namely receive quality, set up (as a second setter), and good defense, which are very important elements in volleyball to help maintain the balance of the game (defense & attack) and make the game more competitive.

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