

# Students' Level of Volleyball Refereeing Skills

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## Abstract

**The aim of this study was to evaluate the volleyball refereeing skill levels of students, with the obtained results serving as data for a program aimed at enhancing students' volleyball refereeing skills. A mixed quantitative and qualitative research methodology was employed in this study to depict their volleyball refereeing skill levels of students at a university in southern China. According to the study, the 1st referee, 2nd referee, line judge and table management all have a moderate level of volleyball officiating skills.**

## Keywords

**Students, Volleyball Refereeing, Volleyball Refereeing Skills.**

## 1. Introduction

Referees served as both rule enforcers and organizers, ensuring the smooth progress of the game and directly or indirectly impacting its outcome. They were indispensable in maintaining players' conduct and ensuring the safety and fairness of matches (Karaçam & Pular, 2016). The importance of refereeing extended beyond game management; it influenced players' technical and tactical abilities and guided the evolution of volleyball. As volleyball rules evolved and sports technology advanced, the demands on refereeing skills increased. Therefore, studying volleyball refereeing skills became imperative.

Skill acquisition embodies a dynamic growth process intertwined with rule-based knowledge guidance, implicit understanding of intentional knowledge, and skill refinement through practical experience (Cao & Du, 2015). Skills evolve through various learning processes, such as deliberate effort and training (Avugos et al., 2021). Hubert Dreyfus (2019) in his model of skill acquisition delineated seven stages: novice, advanced beginner, competence, proficiency, expertise, and mastery. Dreyfus suggested that only emotionally engaged and physically involved learners progressed to the latter three stages of proficiency, expertise, and mastery. Similarly, the development of refereeing skills often hinged on practical experience gained through officiating real games or from prior experience as players (Renden et al., 2014). definition of volleyball officiating skills in this paper is as follows: when students serve as volleyball referees, volleyball officiating skills are the application of knowledge and experience to perform the act of officiating a volleyball competition.

Moreover, scholars (Dong, 2020; Zhang, 2021; Zhong, 2018) define volleyball refereeing ability as a comprehensive term encapsulating the skills necessary for individuals or groups to effectively carry out activities in accordance with specific requirements and norms during gameplay. It encompasses an individual's level of knowledge, training in professional ethics, business acumen, and psychological resilience, among other aspects. The distinction between competence and skill lies in the fact that skills are acquired through learning, whereas competence is often inherited or influenced by genetic factors. Skills are manifestations of movements and methods, while competence encompasses the mental processes regulating higher-level cognitive activities.

This study delved into the analysis of refereeing skills, considering them as the cornerstone of development. It centers on the knowledge acquired by students in classrooms, the refereeing practices honed within educational settings, focusing on the learning process. The study posits

that a solid theoretical foundation, coupled with practical experience and refinement, is necessary for accurate judgment. It asserts that volleyball refereeing skills serve as pivotal indicators of knowledge levels, practical abilities, and the logical linkage between the two.

## 2. Materials and Methods

### 2.1. Students of the Study

The students in this study came from four different grades within the Physical Education Department of a university in southern China. The department had a total of 802 students, out of which 526 were randomly chosen to take part in the study across various grades, determined using the Raosoft Sample Size Calculator.

### 2.2. Instrumentation

The major research instrument used in the present study was a survey questionnaire. This survey questionnaire has two (2) parts:

Part 1. This was used to elicit information about the profile of the students.

Part 2. This was employed to assess the students' level of volleyball refereeing across the four roles: 1st referee, 2nd referee, line judge, and table management. It comprised four dimensions: (1) hand signals, (2) knowledge, interpretation, and application of rules, (3) presentation and appearance, and (4) game management.

### 2.3. Data Analysis

Table 1. Students' Level of Volleyball Refereeing Skills

Weighted Mean	Level of Volleyball Refereeing Skills
4.20-5.00	Very High
3.40-4.19	High
2.60-3.39	Moderate
1.80-2.59	Low
1-1.79	Very Low

The data collected were tallied and treated using the following analytic tools: Mean. This was used to determine the students' level of volleyball refereeing skills. Table 1 shows a five-point Likert scale used to interpret the means.

## 3. Students' Level of Volleyball Refereeing Skills

### 3.1. 1st Referee

Table 2. 1st Referees' Level of Volleyball Refereeing Skills

Level of refereeing skills of the 1st referee	Mean	Descriptive Interpretation
Hand signals	2.67	Moderate
Knowledge, interpretation, application of rules	2.77	Moderate
Presentation and appearance	2.91	Moderate

Managing of the game	2.91	Moderate
Category Mean	2.82	Moderate

Table 2 presents the 1st referees' level of volleyball refereeing skills. The data show that the 1st referees' level of volleyball refereeing skills is moderate which obtained a category mean of 2.82. This suggests that while 1st referees possess a certain level of skill, there is a room for improvement. Both the International Volleyball Federation (FIVB) and the Chinese Volleyball Association (CVA) mandate that referees uphold the mental demeanor and image befitting an enforcer both on and off the court (Du & Yan, 2015). This underscores the significant role of a referee's committed mental outlook in the officiating process.

### 3.2. 2nd Referee

Table 3. 2nd Referees' Level of Volleyball Refereeing Skills

Level of refereeing skills of the 2nd referee	Mean	Descriptive Interpretation
Hand signals	2.77	Moderate
Knowledge, interpretation, application of rules	2.84	Moderate
Presentation and appearance	2.93	Moderate
Managing of the game	2.92	Moderate
Category Mean	2.87	Moderate

Table 3 reveals the 2nd referees' level of volleyball refereeing skills. The results present that the 2nd referees' level of volleyball refereeing skills is moderate, as supported by the means of all the specific indicators and the category mean of 2.87. This implies that there may be areas for improvement in their skills and knowledge of volleyball refereeing.

The findings of this study align with Zhong's research from 2018, which surveyed volleyball referees in Guangdong Province. The survey revealed that 28.75% of referees were highly concerned about their mental well-being while officiating, 57.5% were moderately concerned, and 10% expressed some level of concern. Only 3.75% of referees had lower expectations for themselves. These results indicate that volleyball referees in Guangdong Province exhibit a high level of professionalism. They believe that maintaining a positive mental state, professionalism, and a dignified appearance can enhance their authority during games, earn respect from players and coaches, and discourage them from challenging referee decisions arbitrarily.

### 3.3. Line Judge

Table 4. Line Judges' Level of Volleyball Refereeing Skills

Level of refereeing skills of the line judge	Mean	Descriptive Interpretation
Hand signals	2.89	Moderate

Knowledge, interpretation, application of rules	2.93	Moderate
Presentation and appearance	3.00	Moderate
Category Mean	2.94	Moderate

Table 4 presents the line judges' level of volleyball refereeing skills. The data show that the line judges' level of volleyball refereeing skills is moderate, as supported by the means of all the specific indicators and the category mean of 2.94. This implies areas where further training or support may be beneficial. While the skills are deemed moderate overall, identifying specific areas of strength and weakness can help tailor training programs to address any deficiencies. As Zhang (2023) found, in volleyball matches referees need to perform a variety of hand gestures to indicate the course of the match, but these gestures are often not easily and accurately recognized and understood, leading to difficulties in managing the match and inefficiencies in referee training.

### 3.4. Table Management

Table 5. Table Managements' Level of Volleyball Refereeing Skills

Level of refereeing skills of table management	Mean	Descriptive Interpretation
Knowledge, interpretation, application of rules	2.98	Moderate
Presentation and appearance	3.00	Moderate
Category Mean	2.99	Moderate

Table 5 displays the table managements' level of volleyball refereeing skills. As presented in the table, the table managements' level of volleyball refereeing skills is moderate, which is supported by means of all the specific indicators and the category mean of 2.99. This suggests areas where targeted training and development initiatives may be warranted. While the overall level of proficiency is considered moderate, identifying specific areas of strength and weakness can guide efforts to enhance skills such as record-keeping, time management, and communication with officials and players. Just as Avugos et al. (2021) argued that specialized knowledge is a crucial factor in individual differences, they suggested that future referees should be required to pass a theoretical knowledge test before officiating matches.

### 3.5. Summary of the Students' Level of Volleyball Refereeing Skills

Table 6. Summary of the Students' Level of Volleyball Refereeing Skills

Students' Level of Volleyball Refereeing Skills	Category Mean	Descriptive Interpretation
1st referee	2.82	Moderate
2nd referee	2.87	Moderate

Line judge	2.94	Moderate
Table management	2.99	Moderate
Overall Mean	2.91	Moderate

Table 6 reveals the summary of the students' level of volleyball refereeing skills. As presented in the table, the students' level of volleyball refereeing skills is moderate as supported by the overall mean of 2.91. This suggests areas where targeted training and development efforts may be beneficial. While the overall proficiency level is considered moderate, identifying specific areas of strength and weakness among the students can guide interventions aimed at enhancing their skills and knowledge in volleyball refereeing.

In line with Avugos et al.'s (2021) findings, which identified expertise and experience levels as key factors influencing individual differences, it was suggested that referees undergo testing on both theoretical knowledge and practical skills. As argued by Wu (2018), relevant knowledge is essential for any task undertaken. When individuals engage in physical labor, their skills encompass pertinent knowledge.

Consistent with Geng's (2024) research, a survey conducted among 34 high-level volleyball referees in Shaanxi Province revealed that increased training correlates with a better understanding and utilization of rule changes and additions. Volleyball refereeing skills, including psychological resilience and theoretical understanding, manifest in effective officiating, thus enhancing these skills through training. Referees can effectively enhance their instantaneous decision-making abilities by sharpening their focus through practice. They can also elevate their skills by acquiring professional theoretical knowledge, studying video recordings of expert referees, and engaging in communication with experienced peers. Additionally, English language training for Chinese referees enhances communication skills during officiating and prepares them for advancement. The establishment of training programs on high-tech applications by refereeing associations, coupled with mentorship from experienced international referees, aids in adapting to technological advancements.

Improving the promotion mechanism for volleyball referees, clarifying assessment standards, and fostering a transparent environment for advancement can incentivize referees to enhance their skills. Establishing a comprehensive training mechanism, leveraging mobile media platforms for disseminating exemplary officiating practices, and promoting ethical standards can further enhance referees' professionalism and performance.

Du's (2022) findings from the Guangxi Normal University Education Teaching Reform Project echo these sentiments, highlighting the impact of prior sports theory and skills learning on volleyball students' refereeing abilities. Emphasizing the importance of theoretical understanding alongside practical training is crucial for developing proficient referees.

Moreover, Liu (2018) underscores the significance of mastering professional theoretical knowledge for volleyball referees. A lack of confidence in unfamiliar situations during matches can lead to hesitation, impeding the fluidity of the game.

Similarly, Zhou (2020) advocates for active referee participation in training to enhance officiating skills. Strengthening referee training, incorporating computer and English courses, and diversifying training methods can broaden referees' skill sets and prepare them for international events.

## 4. Summary of Findings

The results of the study are summarized as follows: Referee-Students' Level of Volleyball Refereeing Skills. 1st referees' level of volleyball refereeing skills is moderate. 2nd referees' level of volleyball refereeing skills is moderate. Line judges' level of volleyball refereeing skills is moderate. Table managements' level of volleyball refereeing skills is moderate.

## 5. Conclusion

Based on the findings of the study the following conclusions were drawn: Referee students' level of volleyball refereeing skills is moderate. This implies that while referees possess a certain level of competency and belief in their abilities, there is still room for enhancement to reach higher levels of proficiency in their role as volleyball officials.

## Acknowledgements

Fund Project: 2024 Hanshan Normal University Teaching Reform Project (No.PX-161241582).

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