



Analysis of Video Assistant Referee (VAR) Technology Effectiveness in Correcting and Supporting Decisive Refereeing Decisions in the Iraqi Stars Football League 2024/2025 Season

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Abstract

Objectives: This study aimed to analyze the effectiveness of Video Assistant Referee (VAR) technology in correcting and supporting decisive refereeing decisions in the Iraqi Stars Football League during the 2024/2025 season.

Materials and Methods: This study used a descriptive analytical method. The research population consisted of 28 referees accredited by the Iraqi Football Association and licensed to officiate matches using VAR technology. The sample included 280 decisive refereeing cases reviewed through VAR intervention, including penalty kicks, red cards, goals, mistaken identity, and other discretionary cases. Data were collected through official referee reports, VAR analysis forms, and official match video recordings. Data were analyzed using percentages, mean, standard deviation, Pearson correlation coefficient, and Chi-square test with SPSS version 22.

Results: The findings showed that VAR contributed significantly to correcting decisive refereeing decisions. Of the 280 cases reviewed, 75% resulted in decision changes, while 25% confirmed the original decision. Penalty kicks represented the highest proportion of VAR interventions at 36.4%, followed by other discretionary cases at 24.6%, red cards at 20.7%, goals at 17.9%, and mistaken identity at 0.4%. The Chi-square test indicated a significant relationship between decision type and review outcome.

Conclusions: VAR technology proved effective in supporting referees and improving the accuracy of decisive decisions in the Iraqi Stars Football League. The greatest impact was found in penalty kick and red-card decisions. The study recommends continued implementation of VAR, stronger referee training, and improved stadium technology infrastructure.

Keywords: Video Assistant Referee, VAR, refereeing decisions, football, Iraqi Stars League.

Introduction

Modern football has experienced rapid development in technical, tactical, organizational, and refereeing aspects. As the speed and intensity of the game have increased, referees are required to make accurate decisions under high pressure and within very limited time. Decisive refereeing decisions, such as penalty kicks, goals, red cards, and mistaken identity, can directly influence the outcome of a match. Therefore, the use of technological support has become increasingly important in modern football officiating.

Video Assistant Referee (VAR) technology was introduced to reduce clear and obvious errors and to support referees in reviewing critical match incidents. According to IFAB protocols, VAR may intervene in four main situations: goals or no goals, penalties or no penalties, direct red cards, and mistaken identity. However, the final decision remains under the authority of the on-field referee.

The Iraqi Stars Football League began implementing VAR technology as part of efforts to improve refereeing quality and match fairness. Nevertheless, the effectiveness of VAR in the Iraqi football context still requires scientific evaluation. Questions remain regarding how often VAR changes refereeing decisions, which types of decisions are most affected, and whether VAR truly contributes to improving refereeing fairness.

Based on this background, this study analyzes the effectiveness of VAR technology in correcting and supporting decisive refereeing decisions in the Iraqi Stars Football League during the 2024/2025 season.

Materials and Methods

Research Design

This study employed a descriptive analytical method because it was appropriate for examining actual VAR intervention data and describing the effectiveness of VAR technology in official football matches.

Participants and Sample

The research population consisted of 28 referees accredited by the Iraqi Football Association and licensed to officiate matches using VAR technology. The research sample consisted of 280 decisive refereeing cases reviewed through VAR during the 2024/2025 Iraqi Stars Football League season. The cases included penalty kicks, red cards, goals, mistaken identity, and other discretionary cases reviewed through the VAR system and on-field review procedures.

Research Instruments

The data were collected using official referee reports, VAR review forms, and official video recordings of matches. These instruments were used to identify the type of decision, the review process, and the final decision after VAR intervention.

Study Variables

The independent variable was the use of VAR technology. The dependent variable was the accuracy of refereeing decisions after VAR review. The supporting variables included type of decision, number of VAR interventions, decision changes, and confirmed decisions.

Statistical Analysis

Data were analyzed using SPSS version 22. The statistical methods included percentages, mean, standard deviation, Pearson correlation coefficient, and Chi-square test at a significance level of 0.05.

Results

The results showed that VAR intervention was most frequently used in penalty kick decisions. Out of 280 cases, penalty kicks accounted for 102 cases or 36.4%. Other discretionary cases accounted for 69 cases or 24.6%, red cards accounted for 58 cases or 20.7%, goals accounted for 50 cases or 17.9%, and mistaken identity accounted for only one case or 0.4%.

The analysis also showed that 210 decisions, or 75%, were changed after VAR review, while 70 decisions, or 25%, were confirmed. This indicates that VAR played a major role in correcting decisive refereeing decisions during the season.

The results further showed that on-field review was the dominant source of final decision-making. A total of 249 cases, or 88.9%, were decided after on-field review, while only 31 cases, or 11.1%, were issued directly through VAR recommendation. This confirms that VAR functioned as a support system while maintaining the authority of the main referee.

In terms of decision accuracy, goal-related decisions had the highest confirmation rate, reaching 96%. Red cards had a confirmation rate of 89.7%, while penalty kicks had a confirmation rate of 88.2%. These findings indicate that referees were relatively accurate in goal-related decisions, while penalty kicks and red cards required more frequent VAR support.

The Pearson correlation coefficient showed a strong relationship between decision type and review outcome, with $r = 0.62$ and $p < 0.05$. The Chi-square test also showed a significant relationship between decision type and review result, with $p = 0.03$.

Discussion

The findings of this study indicate that VAR technology had a positive effect on the correction and support of decisive refereeing decisions in the Iraqi Stars Football League. The high percentage of changed decisions demonstrates that VAR was not merely a procedural tool but played an important role in improving decision accuracy.

Penalty kicks were the most frequently reviewed decision type. This result is reasonable because penalty decisions often involve complex incidents such as physical contact, handball, and fouls inside the penalty area. Similar findings were reported by Helsen and Bultynck (2018), who emphasized that VAR is especially useful in high-pressure situations where referees may have limited visual access to incidents.

Red-card decisions also showed a high level of VAR influence. This supports the findings of Spitz, Memmert, and Hagemann (2021), who found that VAR improves decision-making quality in critical disciplinary situations. Since red cards can significantly affect team strategy and match balance, VAR intervention becomes essential to ensure fairness.

The high confirmation rate in goal-related decisions indicates that on-field referees and assistant referees were relatively accurate in identifying goal situations. This finding is consistent with Kolbinger and Lames (2021), who stated that VAR is often used not only to correct errors but also to confirm correct decisions in professional football.

The dominance of on-field review also reflects the correct implementation of VAR principles. According to IFAB protocols, the final decision must remain with the main referee. Therefore, VAR should support rather than replace human judgment. This finding strengthens the idea that technology in sport should function as an assistance mechanism while preserving referee authority.

Overall, the findings suggest that VAR improved refereeing fairness in the Iraqi Stars Football League. However, the high percentage of changed decisions may also indicate the need for further referee training, especially in penalty kick and red-card situations. Better referee education, improved camera quality, and clearer intervention standards are necessary to ensure more consistent VAR implementation.

Conclusions

This study concluded that VAR technology was effective in correcting and supporting decisive refereeing decisions in the Iraqi Stars Football League during the 2024/2025 season. VAR intervention contributed to a high percentage of decision changes and helped improve refereeing accuracy and fairness.

Penalty kicks and red cards were the most affected decision types, while goal-related decisions showed the highest confirmation rate. The results also confirmed that VAR supported the authority of the on-field referee through the on-field review mechanism.

Recommendations

The Iraqi Stars Football League should continue using VAR technology in official matches. Referee training programs should be improved, especially in penalty kick, red-card, and on-field review situations. The league should also strengthen stadium infrastructure, including camera quality and camera angles, to support more accurate VAR decisions. In addition, VAR indicators should be included in referee performance evaluation systems.

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