

Analysis of Goals Scored in the 2025 Africa Cup of Nations in Morocco

تحليل الأهداف المسجلة في كأس أمم أفريقيا لكرة القدم المغرب 2025

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**Abstract:** This study aimed to analyze the goals scored during the 2025 Africa Cup of Nations, focusing on the method of goal scoring, timing of goals, scoring zones, and body parts used, as well as determining the relative contribution of each indicator to the total goals scored. The study included all participating national teams as the research sample and employed a descriptive survey methodology due to its suitability for the nature of the research problem. Data were collected using a standardized pedagogical observation grid, through which video recordings of all matches were meticulously analyzed, encompassing a total of 121 goals scored across 52 matches.

**Keywords:** Africa Cup of Nations; Video Analysis; Offensive Performance Analysis; Soccer.

**المخلص:** هدفت هذه الدراسة إلى تحليل الأهداف المسجلة في بطولة كأس الأمم الأفريقية 2025، من خلال الاعتماد على كيفية تسجيل الأهداف، توقيت تسجيلها، مناطق التسجيل، وأجزاء الجسم المستخدمة في إحراز الأهداف، بالإضافة إلى تحديد الأهمية النسبية لكل مؤشر ضمن إجمالي الأهداف المسجلة. اعتمدت الدراسة جميع المنتخبات المشاركة في البطولة كعينة بحث، وتم توظيف المنهج الوصفي بالأسلوب المسحي نظراً لملاءمته لطبيعة المشكلة البحثية. وتم جمع البيانات باستخدام شبكة ملاحظة بيداغوجية مقننة، حيث خضعت أشرطة الفيديو الخاصة بالمباريات للتحليل الدقيق، بما يشمل جميع الأهداف المسجلة والبالغ عددها 121 هدفاً خلال 52 مباراة.

**الكلمات المفتاحية:** كأس أمم أفريقيا; تحليل الفيديو; تحليل الأداء الهجومي; كرة القدم.

## 1. INTRODUCTION

The 2025 Africa Cup of Nations (AFCON), also known as the Total Energies Africa Cup of Nations 2025, represents the 35th edition of the continent's most prestigious football tournament. It is hosted by Morocco from December 21, 2025, to January 18, 2026, marking the country's second time hosting the competition after the 1988 edition. This tournament is the fourth under the new organizational format, following Egypt 2019, Cameroon 2022, and Ivory Coast 2024. The competition features 24 national teams divided into six groups, with the top two teams from each group advancing, along with the four best third-placed teams, forming a total of 16 teams in the knockout stage. These teams then compete in elimination rounds until one team is crowned champion. This edition witnessed Senegal winning its second title in history, following its triumph in Cameroon 2022.

Football is watched by millions worldwide, with its popularity peaking during continental and international tournaments. While most fans focus on teams, players, and the entertainment aspects of matches, coaches, researchers, and sports scientists are more concerned with performance analysis and deriving insights to identify factors that enhance high-level performance and address those leading to underperformance. Technical performance analysis is considered a fundamental tool for understanding players' tactical and technical behaviours. It enables coaches to accurately evaluate strengths and weaknesses, design specialized training programs to improve both individual and collective performance, and enhance tactical efficiency during matches (Njororai, 2004, p. 326).

According to Hughes and Franks (2004), player performance analysis should be conducted by tracking each player individually throughout the match. This can be achieved by evaluating basic game skills, monitoring the execution of specific tactical tasks assigned within game plans and playing systems, or by assessing performance across all these aspects collectively, depending on the evaluation method used. In

contrast, team performance analysis involves simultaneously monitoring all players during the match, while also tracking the dynamic and often rapid transitions of match events. Match analysis is therefore considered a valid and effective system for performance evaluation at all times.

The topic of offensive performance particularly shooting and goal scoring has received increasing attention in scientific literature. Numerous studies have sought to analyze scoring characteristics in major tournaments. In this context, we previously conducted a study analyzing shooting performance during the group stage of the 2018 FIFA World Cup Russia. The study adopted a descriptive survey methodology based on a sample of 48 matches. The results indicated that most shots were off target, with the majority taken from outside the goal frame, primarily from the 16.5-meter area, and with a preference for the right foot.

In a subsequent study, we examined shooting performance during the group stage of the 2019 Africa Cup of Nations in Egypt, using a descriptive survey method on a sample of 36 matches. The findings revealed a similar trend to the previous study, with most shots being off target, largely taken from inside the penalty area, and predominantly executed using the right foot.

To further investigate determinants of winning, we analyzed all goals scored during the 2024 Africa Cup of Nations in Ivory Coast, using a descriptive survey approach on a sample of 52 matches, which included a total of 119 goals. The results showed that 72% of goals were scored from open play, and 45% occurred during the final 30 minutes of matches. Additionally, most goals were scored using the right foot (53%), and the majority were from within the 16.5-meter area (72%).

In a similar context, we analyzed goals scored during the UEFA Euro 2024 in Germany, using the same descriptive survey methodology on a sample of 51 matches with a total of 117 goals. The findings indicated that 90% of goals came from open play, while 25% were scored during the final 15 minutes of matches. Most goals were

also scored with the right foot (55%), and the majority were from within the 16.5-meter area (59%).

Overall, the findings across these studies suggest consistent patterns regarding sources of goals, timing of scoring, and the most effective scoring zones. This reinforces the importance of studying the technical characteristics of offensive performance in major tournaments.

## **2. PROBLEMATIC**

Based on a review of previous studies related to the subject, and through the observation of the 2025 Africa Cup of Nations (Morocco), which was characterized by a diversity of goal-scoring patterns among participating teams, the researcher identified the need to conduct a comprehensive analysis of all goals scored during the tournament. This analysis aims to evaluate the offensive performance of teams and to uncover the playing strategies adopted, thereby contributing to a deeper understanding of the distinctive tactical approaches of each team.

The study focuses on goal scoring as the primary determinant of winning. This variable is analyzed through several dimensions, including the timing of goals, scoring zones, methods of scoring, and the body parts used in finishing. The significance of this approach lies in its ability to provide accurate scientific indicators that can be used to interpret the effectiveness of offensive performance.

Furthermore, the expected outcomes of this type of analysis emphasize the growing importance of integrating video analysts within technical staff, given their crucial role in supporting the training process and enhancing coaches' tactical decision-making.

## **SUB QUESTIONS**

1. When were the goals scored, and during which time period was the highest number of goals recorded in the tournament?
2. From where were the goals scored, and which zone accounted for the highest number of goals?
3. How were the goals scored, and which method was most frequently used?
4. Who scored the goals, and which body part was most commonly used in scoring?

### **HYPOTHESES**

- H1. The majority of goals will be scored during the final period of the match (76th to 90th minute).
- H2. The penalty area will be the zone from which the highest number of goals is scored.
- H3. Open play will be the primary method of goal scoring, ahead of set-piece situations.
- H4. The right foot will be the body part most frequently used in scoring goals.

### **OBJECTIVES**

This study aims to analyze the technical characteristics of goals scored during the 2025 Africa Cup of Nations (Morocco). This is achieved by identifying the temporal distribution of goals, determining scoring zones, analyzing scoring methods, and examining the body parts used in scoring. The study seeks to provide objective indicators that contribute to evaluating teams' offensive performance and understanding the tactical patterns employed throughout the tournament.

### **SIGNIFICANCE**

The scientific significance of this study lies in providing a systematic analysis of the technical characteristics of goal scoring, thereby contributing to a deeper theoretical understanding of the determinants of offensive efficiency in football. From a practical perspective, the study offers quantitative indicators that can be utilized in training planning, the design of tactical programs, and in supporting technical staff decisions based on performance analysis data.

### **3. MATERIAL AND METHODS**

#### ***1.Exploratory study***

A pilot study was conducted on a match from the 2025 Arab Cup (Qatar) between the Algerian national team and the Bahraini national team, held on December 6, 2025, which ended with a score of 5–1 in favor of Algeria.

The researcher adopted a scientific observation method to analyze the six goals scored in the match. Video clips of the goals were downloaded and reviewed using a video player on a computer. The analysis aimed to extract several variables, including: Goal timing, Scoring methods, scoring zones, Body parts used in scoring. The pilot study yielded the following outcomes:

- Confirmation of the feasibility of goal analysis using computer-based video playback.
- Verification of the scientific validity of the analysis instrument.
- High inter-rater agreement among researchers.
- Identification of technical issues and potential difficulties that may affect the analysis process.

#### ***2.Approach to study***

In this study, researchers used the descriptive analytical approach, following the survey method to suit the nature of the study, which is the same method used in all previous studies that dealt with the same subject of the current study.

### ***3.Sample of the Study***

The study population consisted of all matches of the 2025 Africa Cup of Nations (Morocco), totaling 52 matches, including 36 matches in the group stage and 16 matches in the knockout stage. Given the adoption of a survey method, the study sample included the entire population, with all matches analyzed, representing a 100% coverage rate.

### ***4.Data and information collection tools***

The researcher relied on several tools and methods for data collection in this study. Initially, data were obtained from the database of the Confederation of African Football (CAF 2025) through its official website. The primary source of analysis consisted of video clips of the scored goals, which were downloaded onto a DELL laptop running the Windows 10 operating system.

The video clips were analyzed using KMPlayer 64X, which provides features such as playback speed control (slow motion and fast forward), screen capture, image extraction from video frames, as well as video cutting, editing, and annotation. These functionalities facilitated the accurate documentation and analysis of goals.

Finally, a structured pedagogical observation sheet was used, designed using Microsoft Excel 2016, following the same methodological approach adopted by (Lames, 1994).

### ***5.Scientific Conditions of Tools***

The reliability of the CAF 2025 database and the goal analysis tool was established by comparing results using Cohen's Kappa coefficient (K), which ranged between 0.82 and 0.89, indicating a high level of agreement.

The validity of the video analysis tool was also verified by reanalysing the pilot match twice, with a one-week interval between analyses. The Pearson correlation coefficient was calculated between the two sets of results for the following variables: Scoring methods, Goal timing, Scoring zones, Body parts used. The calculated Pearson coefficient ( $r = 0.804 \pm 0.037$ ) indicated strong reliability.

Furthermore, validity was confirmed by calculating the square root of the reliability coefficient, yielding a value of 0.897 ( $\pm 0.015$ ), which demonstrates that the instrument is both reliable and valid.

### ***6.Field Application Procedures***

The researchers designed the pedagogical observation card and set the tables for the method of scoring goals, the tables for the times of scoring goals, the tables for the areas of scoring goals, and finally the tables for the parts of the body in which the goals were scored. The researchers themselves took over the process of observation and direct registration while watching the tournament matches, whether by live broadcasting or by recording and repeating on the FULLREPLAYS database, and then confirming by watching the videos of all 121 goals in the tournament

After the process of recording and unpacking within the tables of the objectives, verifying them and comparing them with the CAF 2025 database, the percentages corresponding to the number of objectives were calculated and then represented in their graphs that facilitate the process of reading and interpreting them later during the discussion of the results.

The registration, unloading and analysis processes began on the first day of the tournament, corresponding to December 21, 2025, and lasted about one months,

ending on January 18, 2026, with the preparation of all tables and their graphs, as well as the interpretation of their results.

7. Statistical methods used in the study

The researchers used simple methods in line with the nature of the topic. In the section of the scientific conditions of the study tools, they used the Cohen's Kappa (K) coefficient, which measures the agreement between two evaluators, in addition to the Pearson correlation coefficient to calculate the stability of the tests. They were calculated by the Statistical Packages for Social Sciences (SPSS version 26), and the level of significance was set at 0.05.

As for the analysis process, they relied on calculating or collecting the frequencies of the goals and the corresponding percentages. Finally, some figures and graphs were used, represented by the histogram (Figure 01), the graphic columns (Figure 02) and (Figure 04), the sectoral circle of sunlight (Figure 03).

4. RESULTS

Table 01. Goals-scoring times in 2025 AFCON

| Time frame  | goals | percentage |
|-------------|-------|------------|
| 'to 15 '1   | 8     | % 6.61     |
| 'to 30 '16  | 21    | % 17.36    |
| 'to 45 '31  | 22    | % 18.18    |
| 'to 60 '46  | 21    | % 17.36    |
| 'to 75 '61  | 21    | % 17.36    |
| 'to 90 '76  | 24    | % 19.83    |
| 'to 120 '91 | 4     | % 3.30     |
| Total       | 121   | % 100      |

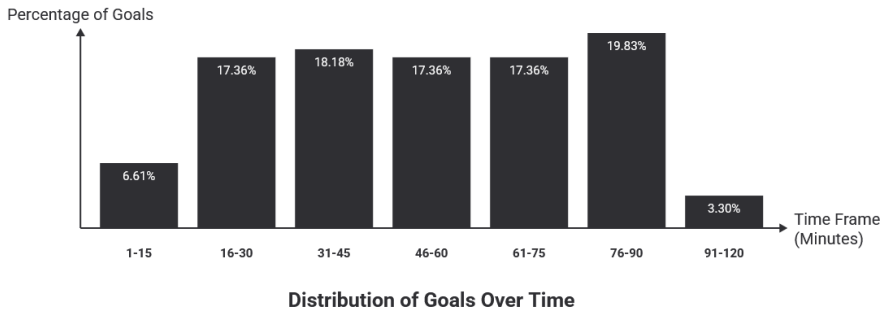
Table 01 shows that the peak of goal scoring occurred during the final 15 minutes of regular match time, specifically between the 76th and 90th minutes, with a

total of 24 goals, representing 20% of all goals scored. The second-highest period was the last 15 minutes of the first half (31st to 45th minutes), during which 22 goals were recorded (18%).

Overall, the results indicate a relatively balanced distribution of goals across most time intervals, with the exception of the first 15 minutes of the match, during which only 8 goals were scored, representing the lowest scoring rate.

The Senegalese national team recorded the highest number of goals in the final 15 minutes, with a total of four goals. It was followed by the South African, Burkinabe, and Ivorian national teams, each with three goals. In contrast, the Egyptian national team recorded the highest number of goals during extra time, scoring two goals in that period.

At the player level, Bazoumana Toure and Cherif Ndiaye were the top scorers in the final 15 minutes of matches, with two goals each.



**Tabl**

## e 02. Goals-scoring zones in 2025 AFCON

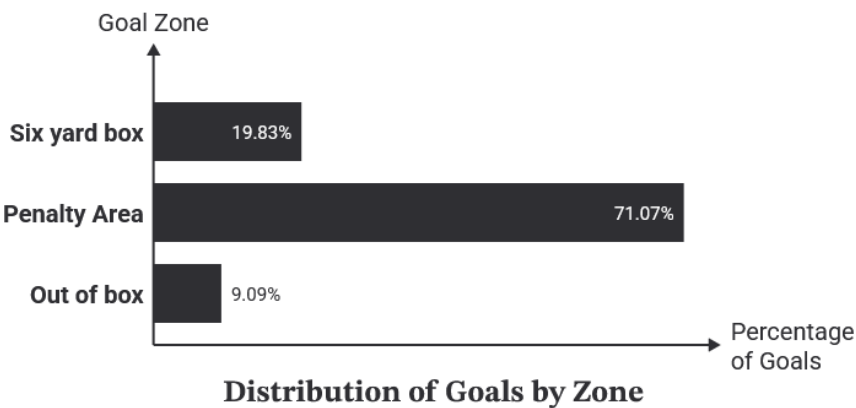
| Zone         | goals      | percentage   |
|--------------|------------|--------------|
| Six yard box | 24         | 19.83 %      |
| Penalty Area | 86         | 71.07 %      |
| Out of box   | 11         | 9.09 %       |
| <b>Total</b> | <b>121</b> | <b>100 %</b> |

Table 02 indicates that the majority of goals were scored from within the 18-yard, commonly referred to as the penalty area, with a total of 86 goals, representing 71% of all goals. This is followed by the 6-yard box (goal area), from which 24 goals were scored (20%), while only 11 goals (9%) were scored from outside the 18-yard.

These findings highlight a strong concentration of goals within the penalty area, reflecting the importance of playing in close proximity to the goal in order to achieve offensive efficiency.

At the team level, both the Egyptian and Senegalese national teams recorded the highest number of goals scored from outside the 18-yard area, with two goals each. The Senegalese national team also led in goals scored from within the 18-yard area, with a total of 10 goals. Meanwhile, in the 6-yard area, both the Ivorian and Nigerian national teams shared the top position, with four goals each.

At the player level, 11 players scored from outside the 18-yard area, each with one goal. Brahim Diaz ranked first in goals scored from within the 18-yard area, with four goals, while Victor Osimhen recorded the highest number of goals from within the 6-yard area, with three goals.



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**Table 03.** Goals-scoring situations in 2025 AFCON

| Situations         |              | goals | percentage |
|--------------------|--------------|-------|------------|
| From playing (75%) | Cross pass   | 39    | % 32.23    |
|                    | Individual   | 30    | % 24.79    |
|                    | Through pass | 6     | % 4.96     |
|                    | Def Errors   | 10    | % 8.26     |
|                    | Own goal     | 6     | % 4.96     |
| Set piece (25%)    | Corner       | 12    | % 9.92     |
|                    | Penalty      | 12    | % 9.92     |
|                    | Free kick    | 6     | % 4.96     |
| Total              |              | 121   | % 100      |

Table 03 shows that 91 goals, representing 75% of the total, were scored from various open-play situations. The largest proportion resulted from crosses, accounting for 39 goals, followed by individual efforts with 30 goals. Additionally, 10 goals resulted from defensive errors in saves and clearances, while 6 goals were produced through passes between defenders and through passes. The remaining 6 goals were own goals, scored by defenders against their own teams. The remaining 30 goals (25%) were scored from set-piece situations. Out of 17 penalty kicks awarded, 12 were successfully converted, yielding an efficiency rate of 71%. From a total of 456 corner kicks, only 12 goals were scored, corresponding to a low efficiency rate of 2.63%. The remaining 6 goals were scored from indirect free kicks.

At the team level, the Nigerian national team recorded the highest number of goals from open play, with 11 goals, including 8 goals resulting from crosses. In contrast, the Gabonese national team scored 4 goals in the tournament, all of which resulted from defensive errors in saves and clearances.

Regarding set pieces, the Moroccan national team led with 5 goals. It also recorded the highest number of penalties both awarded and missed (3 scored, 1 missed). The Tunisian and Malian national teams were the most successful in penalty

scoring, with two goals each. Meanwhile, the Ivorian national team led in goals scored from corner kicks, with a total of 3 goals.

At the player level, Victor Osimhen was the top scorer from open play with 4 goals. In contrast, Ayyoub El Kaabi led in goals scored from set pieces with 2 goals, while Lassine Sinayoko recorded the highest number of goals from penalties, also with 2 goals.

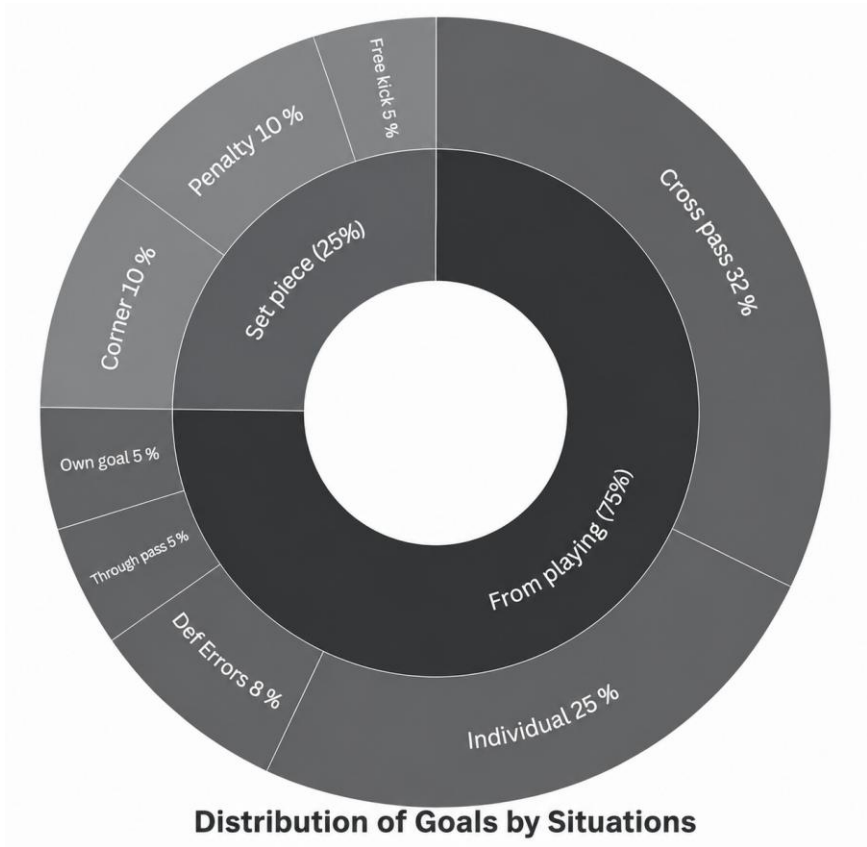


Table 04. Goals-scoring body parts in 2025 AFCON

| Body parts | goals | percentage |
|------------|-------|------------|
|------------|-------|------------|

|              |            |              |
|--------------|------------|--------------|
| Right foot   | 57         | % 47.11      |
| Left foot    | 38         | % 31.40      |
| Head         | 24         | % 19.83      |
| Other        | 2          | % 1.65       |
| <b>Total</b> | <b>121</b> | <b>% 100</b> |

Table 04 indicates that nearly half of the tournament's goals were scored using the right foot, with a total of 57 goals, representing 47%. This percentage is considered relatively low compared to previous tournaments. In contrast, 38 goals were scored using the left foot (31%). Goals scored by headers accounted for 24 goals (20%), which is relatively high compared to previous competitions.

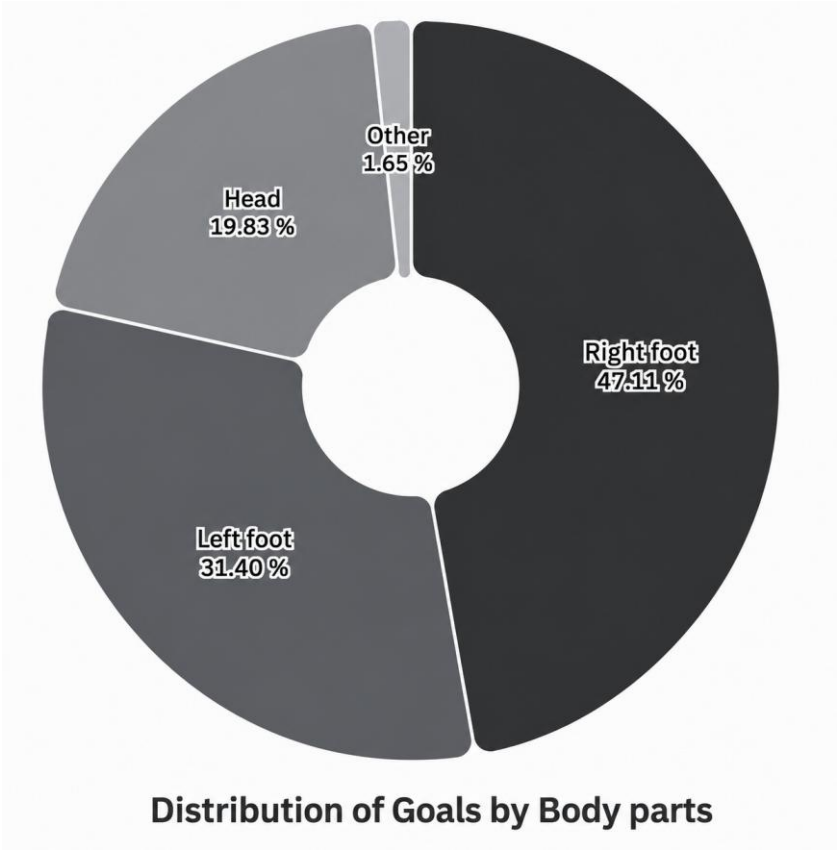
At the team level, the Nigerian national team recorded the highest number of goals scored with the right foot, totaling six goals, while the Senegalese national team led in left-footed goals with the same total. Meanwhile, the Nigerian national team ranked first in goals scored by headers, with four goals.

At the individual level, both Brahim Diaz and Lassine Sinayoko topped the list of right-footed goal scorers, with three goals each. Regarding left-footed goals, Mohamed Salah ranked first with four goals. Meanwhile, Victor Osimhen led in headed goals, with a total of two goals.

5. DISCUSSION

1.Discussion of the First Hypothesis

The noticeable increase in the number of goals scored during the final minutes of the second half can be attributed to a combination of physiological and cognitive factors associated with fatigue. Several studies have indicated that physiological decline among players particularly defenders is a key determinant of this rise in scoring rates (Reilly, 1994; Njororai, 1996a, 1996c, 2004, 2007a, 2007b). Accumulated physical fatigue leads to reduced motor efficiency, diminished ability to maintain proper defensive positioning, and slower responses to dynamic game



situations.

In the same context, Nepfer (1992, 1995, and 1998) highlighted that a decline in physical condition is often accompanied by reduced mental concentration, increasing the likelihood of defensive errors. Fatigue not only affects physical performance but also extends to cognitive functions such as decision-making, information processing speed, and game perception.

Furthermore, studies conducted by Armata et al. (2007a, 2007b) identified several contributing factors to this phenomenon, including fatigue, physical deterioration, increased match intensity, players' tactical roles, and environmental conditions such as dehydration and high temperatures. These variables directly impact players' cognitive functioning, leading to impaired decision-making and loss of concentration, thereby increasing defensive errors.

Accordingly, coaches must efficiently manage players' physical load through the strategic use of substitutions to maintain both physical and tactical performance levels. Although substitutions may involve a degree of uncertainty, the contribution of substitute players in this tournament—scoring 16 goals and providing 8 assists—highlights the critical role of this strategy in influencing match outcomes.

## *2 Discussion of the Second Hypothesis*

The results of the study revealed that the majority of goals were scored from within the penalty area, which is consistent with previous literature indicating that this zone is the most productive scoring area across competitions. This can be explained by the shorter distance to the goal, the higher probability of successful finishing, and the increased opportunities to capitalize on rebounds and second balls.

From this perspective, coaches should focus during training on developing offensive patterns aimed at penetrating the penalty area by improving tactical and

technical aspects such as off-the-ball movement, decisive passing, and finishing quality.

In contrast, a limited number of goals were scored from outside of the box, and a significant proportion of long-range shots were off target. These findings suggest that the effectiveness of such attempts largely depends on players' technical proficiency. Therefore, long-range shooting can be considered a complementary tactical option, selectively utilized by players with high shooting accuracy and power.

### *3 Discussion of the Third Hypothesis*

The study findings indicated that open play was the primary source of goals scored during the tournament, while set pieces also accounted for a considerable proportion of total goals (30 goals). This reflects a noticeable development in teams' tactical organization and strategic execution, as well as the diversity of training methodologies employed.

Regarding the relatively high number of penalties scored (12 goals), this can be attributed to several factors, including increased congestion in the penalty area, a higher frequency of one-on-one duels, and improved refereeing accuracy. Additionally, modern technologies most notably the Video Assistant Referee (VAR) system have contributed to enhancing officiating fairness and reducing errors, which is reflected in the recorded statistics.

These results emphasize the importance of dedicating part of the training process to improving performance in set-piece situations, both in terms of tactical organization and technical execution. They also highlight the necessity for referees to strictly enforce the laws of the game and ensure the absence of impactful infringements within the penalty area during set-piece situations.

### *4 Discussion of the Fourth Hypothesis*

Football is fundamentally a sport that relies on the use of the feet, which explains the higher proportion of goals scored using them compared to headers. The results also showed a clear dominance of right-footed goals, which aligns with the natural distribution of players' dominant foot.

The relatively higher proportion of headed goals can be attributed to several factors, including teams' reliance on aerial play, the use of crosses and set pieces, and players' physical attributes. However, the effectiveness of heading does not depend solely on physical height; it is also influenced by precise tactical factors such as the quality of crosses, positional accuracy, and proper timing of jumps.

## 6. CONCLUSIONS

The tournament matches resulted in a total of 121 goals scored across 52 matches, with an average of 2.33 goals per match. This average is higher compared to the previous edition held in Ivory Coast, which recorded an average of 2.29 goals per match, as well as the preceding tournament in Cameroon, where the average was 1.92 goals per match. This relative increase in scoring rates can be explained in light of the notable development in the level of African football, whether in tactical, physical, or technical aspects.

Regarding match outcomes, the data showed that the majority of matches ended with a win for one of the teams, as 39 matches (75%) concluded without a draw. This proportion reflects a relatively lower level of competitiveness compared to previous editions. In contrast, 13 matches (25%) ended in draws, including five matches (10%) that ended goalless, indicating limited offensive effectiveness in a small number of matches.

In conclusion, the study findings revealed that:

- The final 15 minutes represent the time period during which the highest number of goals were scored in the tournament.

- The penalty area is the zone from which the highest numbers of goals were scored.
- The majority of goals were scored from various open-play situations.
- The right foot is the most frequently used body part in goal scoring.

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