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Assessment of the Nutritional Practices of Algerian Football Players

Khaled Baouche[1], Abderrahmen Tahchi[2], Redouane Berredjem[3], El-hocine Guerroumi[4], Fatah Guezgouz[5]

[1] University of Bouira, Laboratory of Modern Sciences in Physical and Sports Activities. 10000 Bouira, Algeria. E-mail: k.baouche@univ-bouira.dz

[2] University of Constantine 2, Laboratory for the Analysis of Social and Institutional Processes. Email: abderrahmen.tahchi@univ-constantine2.dz

[3] University of Bouira, Laboratory of Modern Sciences in Physical and Sports Activities. 10000 Bouira, Algeria. E-mail: r.berredjem@univ-bouira.dz

[4] University of Bouira, Laboratory of Modern Sciences in Physical and Sports Activities. 10000 Bouira, Algeria. E-mail: e.guerroumi@univ-bouira.dz

[5] University of Bouira, Laboratory of Modern Sciences in Physical and Sports Activities. 10000 Bouira, Algeria. E-mail: f.guezgouz@univ-bouira.dz

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***Abstract*—**The present study aimed to evaluate the nutritional practices of Algerian football players. We used a descriptive survey design. The sample included 52 football players from Algerian clubs, selected via convenience sampling, representing the youth, junior, and senior categories. Data were collected using a questionnaire designed to assess nutritional practices, with responses measured on a three-point scale ("Yes," "Sometimes," "No"). Internal consistency (Cronbach's alpha) was 0.77, and the data were analyzed using SPSS V27. The results indicated that football players' nutritional practices were moderate (RII = 0.74). The study recommends that future research utilise larger sample sizes and longitudinal or interventional designs to examine the impact of nutritional education programs. it also suggests integrating sports nutritionists into football clubs to improve players' nutritional practices.

***Keywords*—**Nutritional practices; Dietary practices; Football

1. Introduction:

Football is one of the most popular and widespread sports globally, played by men and women of across age groups and competitive levels. The sport demands high physical exertion combining endurance, strength, and speed along with mental focus. Nutrition plays a pivotal role in enhancing athletic performance, facilitating and accelerating muscle recovery, enabling players to withstand the rigors of training and competition, and reducing the risk of injury. It also supports overall health and helps manage and control body weight. For football players, nutrition is not merely about eating healthy meals; it is a comprehensive, science-based system. This system includes meal timing, balancing macronutrients (carbohydrates, proteins, and fats), and ensuring adequate micronutrient intake (vitamins and minerals). It also includes a focus on hydration and using nutritional supplements when necessary (Toutaoui & Maqdar, 2018, p. 33; Jabbar et al., 2025, p. 595).

In this context, Balboul et al. (2021) noted that training not grounded in modern scientific principles, compounded with a lack of monitoring of athletes' health and dietary behaviors, can lead to issues that negatively affect both well-being and performance. Furthermore, a balanced and comprehensive diet is crucial for maintaining an athlete's physical, mental, and overall health, preventing illness, and supporting performance levels in line with the demands of training and competition (p. 613). Jean-Paul Blon (as cited in Ghouthi et al.,

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2021, p. 95) found that only a small proportion of athletes (approximately 20%) consume a diet tailored to their specific needs, while the rest rely on standard meals intended for the general population.

In this context, it becomes clear how important it is for athletes to understand the value of balanced nutrition and follow its scientific principles. This involves tailoring their diet to their daily needs and the type of physical exertion required, whether during training or in competition. Consequently, it is necessary to assess the nutritional practices of Algerian football players. This assessment provides a gateway to understanding their dietary behaviors and how well they align with the specific demands of football. Furthermore, examining these practices enables a comprehensive analysis of their various aspects and helps determine how well they meet the nutritional requirements of training and competitive play.

*** Study Objective:**

This research aims to evaluate the nutritional practices of Algerian football players and to determine the extent to which these practices align with the fundamental principles of balanced nutrition and the specific demands of football.

*** Theoretical and Practical Significance of the Study:**

The theoretical significance of this study lies in its contribution to scientific knowledge on sports nutrition by examining football players' nutritional practices. Its practical significance lies in assessing the level of these practices and identifying areas that may require improvement. Consequently, it provides data that coaches and specialists can use to guide players toward nutritional practices better aligned with their individual needs and the training and competitive demands of the sport.

*** Operational definition of nutritional practices:**

In this study, nutritional practices refer to the quality and quantity of food, an athlete's caloric needs, hydration, the distribution and timing of meals, periodic dietary planning, and the ability to apply nutritional knowledge.

2. Materials and Methods:

2.1. Study Design:

This study used a descriptive survey design to evaluate the nutritional practices of football players. The research was conducted during the sports season and assessed nutritional practices under both training and competitive conditions.

2.2. Study Population and Sample:

The target population consists of male Algerian football players among various levels and age categories. The sample includes 52 players among the youth, junior, and senior categories. We selected participants using convenience sampling.

Table 1: Sample Characteristics

	Gender	**n**	**%**
National Level 3	males	11	21.15%
Regional Level 2		13	25%
Regional Level 1		12	23.08%
Provincial Level		16	30.77%
Total		52	100%

The table shows that the Third National Division has 11 male players (21.15%), while the Second Regional Division has 13 (25%). The First Regional Division has 12 players (23.08%), and the Provincial Division has 16 players (30.77%).

2.3. Study Instruments:

A 16 items questionnaire was developed to assess specific nutritional practices among football players, drawing on existing literature (Al-Khawlani & Aziz, 2023; Al-Sowayan, n.d.). Responses were measured using a three-point scale (yes = 3 points, sometimes = 2 points, no = 1 point). The items included both positive and negative statements: 10 positive and 6 negative (items 7, 8, 10, 12, 14, and 16), with the latter reverse-scored. The

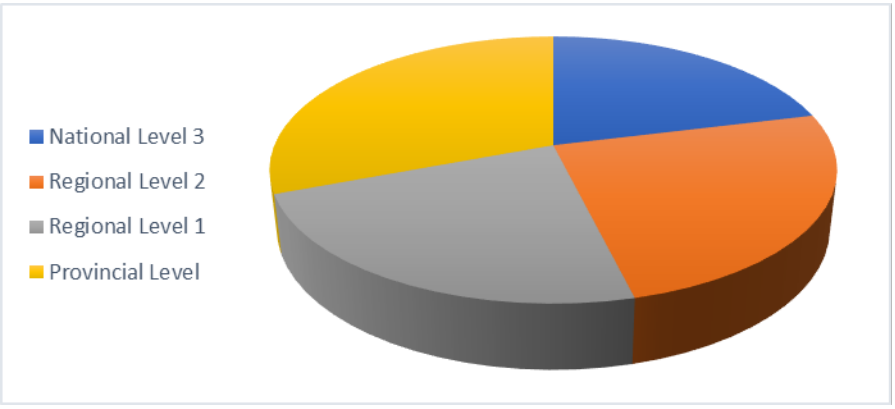

Figure 1: Distribution of sample members by levels.

questionnaire's internal consistency was assessed using Cronbach's alpha coefficient, which yielded 0.77; this is considered an acceptable level of reliability, as it falls within the 0.70 to 1 range (Trifunovski et al., 2025).

2.4. Procedures:

The questionnaire was distributed electronically during the 2025–2026 sports season to facilitate access to the sample. Participants were informed of the study's objective and completed the questionnaire voluntarily between September 23, 2025, and April 27, 2026. We collected responses anonymously to ensure data integrity and accuracy.

2.5. Statistical Analysis:

SPSS version 27 was used to analyse the collected data. Cronbach's alpha coefficient was calculated to estimate the questionnaire's internal consistency reliability. We computed descriptive statistics, specifically frequencies and percentages. Additionally, the Relative Importance Index (RII) was calculated (RII = Mean / 3) to rank the items based on their RII values (Al-Mirghani, 2019). We used the following ranges to evaluate nutritional practices: 0.33 – <0.56 (low), 0.56 – <0.78 (medium), and 0.78 – 1 (high). Finally, we used a significance level of $p < 0.05$.

3. Results:

Table 2: Relative Importance Index (RII) and ranking of nutritional practice items among football players.

n	Items	Yes n (%)	Sometimes n (%)	No n (%)	RII	Practice Level	Rank
1	I make sure my diet is healthy and provides a balanced intake of proteins. carbohydrates. and healthy fats	25 (48.08)	20 (38.46)	7 (13.46)	0.78	High	5
2	My daily calorie needs are determined by the intensity of my training and my playing position	22 (42.31)	22 (42.31)	8 (15.38)	0.76	Moderate	6
3	As a football player. I ensure that protein accounts for 15%-20% of my total daily calorie intake	20 (38.46)	21 (40.38)	11 (21.15)	0.72	Moderate	10
4	Carbohydrates make up 55%-60% of my total daily calorie intake	14 (26.92)	24 (46.15)	14 (26.92)	0.67	Moderate	14
5	I consume carbohydrates about 3-4 hours before a match	29 (55.77)	13 (25)	10 (19.23)	0.79	High	2
6	I ensure that healthy fats account for 30% of my total daily calorie intake	20 (38.46)	21 (40.38)	11 (21.15)	0.72	Moderate	10
7	I don't care about the amount of fluids I drink. regardless of the training conditions (hot. humid. etc.)	21 (40.38)	10 (19.23)	21 (40.38)	0.67	Moderate	14
8	I resort to fast food due to financial constraints	27 (51.92)	17 (32.69)	8 (15.38)	0.79	High	2
9	When my financial situation allows. I buy nutritional supplements to improve my performance	25 (48.08)	12 (23.08)	15 (28.85)	0.73	Moderate	9
10	I skip breakfast due to time constraints	20 (38.46)	19 (36.54)	13 (25)	0.71	Moderate	13
11	An hour after training. I eat a varied meal containing carbohydrates and protein	21 (40.38)	23 (44.23)	8 (15.38)	0.75	Moderate	8
12	I consume soft drinks and fried snacks	21 (40.38)	18 (34.62)	13 (25)	0.72	Moderate	10

Table 2: Relative Importance Index (RII) and ranking of nutritional practice items among football players. *(continued)*

n	Items	Yes n (%)	Sometimes n (%)	No n (%)	RII	Practice Level	Rank
13	My diet changes depending on the season (preparation. competition. rest)	29 (55.77)	13 (25)	10 (19.23)	0.79	High	2
14	I take nutritional supplements without consulting a nutritionist	19 (36.54)	5 (9.62)	28 (53.85)	0.61	Moderate	16
15	I avoid fried foods as much as possible	22 (42.31)	22 (42.31)	8 (15.38)	0.76	Moderate	6
16	I find it difficult to maintain regular mealtimes due to commitments (family. work. studies)	31 (59.62)	11 (21.15)	10 (19.23)	0.80	High	1
	Nutritional Practices				0.74	Moderate	/

Note. RII = Relative Importance Index. Items were classified as Low (0.33 – <0.56). Moderate (0.56 – <0.78). and High (0.78 – 1).

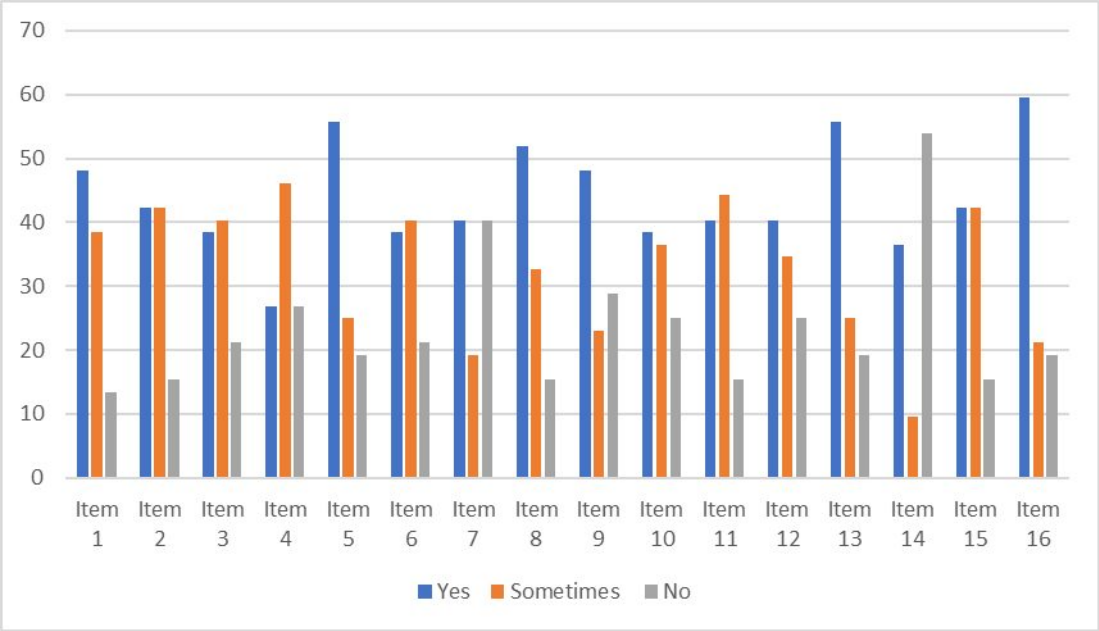

Figure 2: The percentages for nutritional practice items among football players.

The table presents the Relative Importance Index (RII) values and rankings for items on football players' nutritional practices. The overall RII indicates that players' nutritional practices are moderate (RII = 0.74); five items reflect a high level, while the remaining items fall into the moderate category. Item 16,"I find it difficult to maintain regular mealtimes due to commitments (family, work, studies)" recorded the highest RII (0.80). Items 5, 8, and 13 follow, sharing second rank with an RII of 0.79. Item 1 ranks fifth (RII = 0.78), while items 2 and 15 share the sixth rank (RII = 0.76). Item 11 ranks eighth (RII = 0.75), and item 9 ranks ninth (RII = 0.73). Items 3, 6, and 12 share the tenth rank (RII = 0.72), followed by item 10 in the thirteenth rank (RII = 0.71). Items 4 and 7 share the fourteenth rank (RII = 0.67), and finally, item 14, "I take nutritional supplements without consulting a nutritionist", recorded an RII of 0.61.

4. Discussion:

The results indicate a moderate level of nutritional practices among football players. While they show high adherence to certain nutritional practices, other practices fall below this standard, suggesting that the players' nutritional awareness does not align with their actual dietary behaviours. This finding is consistent with Clark et al. (2003) and Raizel et al. (2017), who observed that although players consumed adequate total energy, their carbohydrate intake remained insufficient. Other researchers have also concluded that inadequate carbohydrate consumption is one of the most common issues among football players (Brinkmans et al., 2019; Gomez-Hixson et al., 2022). Additionally, Petri et al. (2016) and Modena et al. (2024) found that although players generally adopted healthy dietary patterns, their specific nutritional habits did not align with sports nutrition guidelines.

Beyond poor adherence to nutritional guidelines and recommendations, the lack of awareness may stem from other factors affecting football players. As Bouaziz et al. (2014) note, these include limited financial resources in sports clubs, the near-total absence of medical staff overseeing and designing nutritional programs, and a lack of

concern for such programs among coaches and administrative staff (p. 422). Furthermore, this study's findings align with those of Jabbar et al. (2025), which highlight significant deficiencies and limitations in the nutritional knowledge of professional football players. These results underscore the need for specialized nutritional support, including group education, individual consultations, and ongoing player monitoring, to achieve positive outcomes.

*** Future Directions:**

Future research should employ larger, probability-based samples to enhance the generalizability of findings. Longitudinal and interventional study designs could examine the impact of nutrition education programs and the integration of sports nutritionists into clubs to improve athletes' nutritional practices. Furthermore, it is important to investigate other factors that influence athletes' nutritional practices, such as support from club management, family support, and nutritional knowledge.

5. Conclusion:

The current study aimed to evaluate the nutritional practices of football players. The results indicated that overall nutritional practices among these players are moderate; they showed high adherence to some practices and moderate adherence to others. The study recommends that future research utilise larger sample sizes and employ longitudinal or interventional study designs to examine the impact of nutritional education programs. It also suggests integrating sports nutritionists into football clubs to improve players' nutritional practices.

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