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Analyzing the Nutritional Awareness, Dietary Practices, Attitudes, and Performance of U-17 Football Players in Ethiopia

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Abstract

Background. Adequate nutrition knowledge is crucial for developing proper eating habits, especially among athletes, as it has a significant impact on sports performance. This underscores the consensus in sports nutrition education among professionals working with athletes.

Study purpose. The study aimed to assess the nutritional knowledge, attitudes, and dietary practices of under-17 football club players in Ethiopia.

Materials and methods. A descriptive survey research method was used, and standardized questionnaires were randomly distributed to 26 footballers to assess participants' knowledge, attitudes, and dietary practices regarding nutrition. Data were analyzed using the t-test, Pearson coefficient, and one-way ANOVA ($p < 0.05$). Reliability analysis showed a Cronbach's alpha value of 0.83 for the scales measuring attitudes towards eating habits and nutrition knowledge (0.79 and 0.78, respectively).

Results. No statistically significant differences ($p > 0.5$) were observed in the data related to eating habits, age, or nutritional understanding. Significant variations in educational backgrounds were noted ($p < 0.05$). Although gender and source were not recognized as correlates of nutritional knowledge, but age and education were.

Conclusions. In summary, the study revealed no significant differences ($p > 0.05$) in nutrition knowledge scores for age, education, and source of information. However, a significant difference ($p < 0.05$) was found between male and female athletes. Gender correlated with dietary habits, while age, education, and source of information did not. The key factor is to encourage ongoing future vision within sports organizations, nutritionists, and educational institutions to continuously refine and enhance nutrition knowledge, attitudes, and practice programs for U-17 players. It is also important to ensure sustainable relevance and effectiveness in the evolving landscape of sports and nutrition.

Keywords: attitude, dietary practice, football players, nutritional knowledge

Introduction

In contemporary athletics, the pursuit of "bigger, faster, stronger" has led to a heightened focus on optimizing performance, driving increased research in sports nutrition. Sports nutrition involves applying understanding the relationship between daily food intake and nutrition, aiming to provide energy required for exercise, support the repair and rebuilding processes, and enhance over wellness and athletic performance (Fink & Mikesky, 2015). Athletes, especially those in high-intensity training and demanding competition schedules, face musculoskeletal injury risks and performance challenges, necessitating proper dietary practices and reliable sources of nutrition-related information (Torres-McGehee et al., 2012). Ensuring optimal fueling is a fundamental requirement for athletes to achieve peak performance (Kerksick et al., 2008; Maughan & Burke, 2011). In addition to being essential for improving on-field performance, nutrition also contributes to muscle growth, injury prevention, accelerated recovery, and support for rehabilitation (Mahan & Escott-Stump, 1998). Athletes' daily dietary choices and fluid intake significantly affect their overall health, body composition, substrate availability

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during exercise, recovery, and recovery time (American Dietetic Association, 2009).

Achieving peak athletic performance is intricately tied to the strategic intake of essential nutrients (Hornstrom et al., 2011; Valliant et al., 2012). Conversely, a deficiency in nutrient supply has been identified as a potential factor leading to a discernible decrease in overall performance. Incorporating sufficient nutrition knowledge into a training program is crucial for achieving adequate nutrition. This knowledge is essential for optimizing the intake of both macronutrients and micronutrients, as well as for adjusting the makeup of the body composition of athletes (Rosenbloom et al., 2002). However, it is noteworthy that despite possessing this knowledge, many athletes struggle to translate it into appropriate dietary alternatives (Sakamaki et al., 2005; Debnath et al., 2019).

Only a minority of athletes consistently make satisfactory dietary choices when faced with a list of meals (Sakamaki et al., 2005). The majority lacks a comprehensive understanding of nutritional healthy practices and lack experience in making informed nutritional daily decisions (Hornstrom et al., 2011). Closing the knowledge gap in nutrition and practical dietary choices remains a challenge for many athletes.

Despite extensive research on nutrition knowledge, dietary habits, and information sources among athletes, there remains a notable gap in understanding these aspects among footballers and coaches, particularly at the professional level. Previous studies often centered on collegiate athletes, revealing deficiencies in nutritional knowledge that hinder adherence to recommended guidelines by authoritative sports medicine and dietetic associations. In 2000, the American Dietitians of Canada (ADC), American College of Sports Medicine (ACSM), and American Dental Association (ADA) released a joint statement outlining the significance of nutrition for athletic performance. They reported, Physical activity, athletic performance, and recovery from exercise are enhanced by optimal nutrition.

Studies conducted a decade apart by Torres-McGehee et al. (2012) and Rosenbloom et al. (2002) underscored persistent misconceptions among athletes regarding macronutrients, micronutrients, and supplementation. Such knowledge gaps raise concerns for performance and the athletes' overall health and well-being. While athletes receive guidance from various sources, including teammates, magazines, and parents, studies indicate that athletic trainers and coaches serve as primary resources for nutritional advice. However, the research has shown a lack of nutritional knowledge among coaches as a whole.

Optimal nutrient intake, nutritional knowledge, dietary habits, and nutritional practices influence athletes' performance, training quality, and post-exercise recovery (Beck et al., 2015). However, the researcher's experience highlights a prevailing belief among coaches, physical trainers, and players that attributes poor competitive performance and fitness levels primarily to training and talent, often overlooking the role of nutrition.

Football stands as one of the world's most renowned sports, captivating millions of viewers with its widespread appeal. The game's popularity continues to surge, drawing an ever-expanding audience on a daily basis (Islam & Rahman, 2021). This study in Ethiopia addresses a lack of information on nutritional knowledge, attitude, and dietary practices among U-17 football club players, coaches, and trainers. It aims to investigate potential correlations between poor performance and factors such as inadequate nutrition knowledge, unreliable information sources, and a lack of awareness about the impact of nutritional practices. Focusing on Ethiopian U-17 football club players, head and assistant coaches, and physical trainers, the research aims to provide valuable insights for future studies. The primary objective is to examine nutritional knowledge, dietary habits, beliefs, and practices within this specific athletic community, aiming to fill existing gaps in understanding the nutritional dynamics.

Materials and Methods

Participants

This research focused on individuals involved with the Ethiopian U-17 football club in the 2022/23 season, specifically U-17 players from youth Gimbi administrative town of selected football club. With a set sample size of 26, representing the entire club population, participants were strategically chosen based on their roles. The main goal was to gain comprehensive insights into the nutritional knowledge, dietary habits, beliefs, and practices of these specific participants within the club.

Study Design

The study used a descriptive survey research method, which randomly distributed a standardized questionnaire developed by Parmenter and Wardle (1999) among 26 U-17 football projects to assess participants' understanding, attitudes, and dietary behaviors related to nutrition. The primary data employed by the researcher was obtained directly from coaches and players, while secondary data was collected from various documents, books, journals, websites, and related research papers. Following the feedback received from the pilot study, corrections and revisions were implemented to eliminate any ambiguity in questionnaire items and ensure the questions' validity, reliability, and language coherence. Subsequently, the refined questionnaire was distributed to selected football clubs.

Procedures

The research procedures were carefully crafted for a comprehensive understanding of nutritional dynamics within the Ethiopian U-17 football club in the 2022/23 season. Using a single cross-sectional design, the study considered objectives, data sources, and logistical factors. A pilot study, involving 26 subjects and translation into Afan Oromo, refined the questionnaire, achieving high reliability (Cronbach Alpha values: 0.83 for attitudes, 0.79 for dietary practices, and 0.78 for nutritional knowledge). A preliminary investigation was carried out to ensure the clarity, appropriateness, and length of the questionnaires. Ambiguous words were removed after their accurate interpretation. Purposive sampling with a sample size of 26, representing the club population, strategically allocated participants based on roles. Ethical considerations were prioritized, ensuring informed consent, participant confidentiality, and overall

well-being. Transparent communication, cultural sensitivity, and disclosure of conflicts of interest were integral to the research's ethical framework. The procedures aimed to provide valuable insights into the nutritional knowledge, dietary habits, beliefs, and practices of specific participants within the club.

Statistical analysis

Quantitative analysis with SPSS version 26.0 included descriptive statistics and various tests exploring relationships and differences between variables. Descriptive statistics, t-tests, Pearson coefficients, and one-way ANOVA were used to examine the data, with a significance level of 0.05.

Results

Using both Kendall's taub and Spearman's rho coefficients, the analysis aimed to uncover connections among variables related to nutritional habits and information sources. When examining the relationship between the source of nutritional information and specific dietary practices, such as meal timing before training or competitions, the findings indicated minimal correlations. The correlation coefficients for these associations ranged from 0.004 to 0.083, and none reached statistical significance ($p > 0.05$). Moreover, when exploring correlations among the dietary practices themselves, weak associations were observed, with the highest correlation between the two practices being 0.265 ($p = 0.145$), which did not reach statistical significance (Table 1).

Spearman's rho coefficients supported these findings, demonstrating negligible correlations between the source of nutritional information and specific dietary practices. However, the finding recommends that the source of nutritional data does not strongly influence or align with particular dietary patterns among the respondents.

The analyzed correlations and regression relationships among variables based on participants' responses. Age showed a negative correlation with certain dietary habits and a positive correlation with others. Notably, eating habits during the off-season strongly correlated negatively with age. While the correlations approached high significance (Table 2).

The regression analysis suggested potential associations between age and specific predictors, although many were statistically significant. The results provide valuable insights into potential relationships between age, nutritional habits, and training practices among respondents, emphasizing the need for further research to understand nuanced factors influencing these connections.

An analysis of variance (ANOVA) was conducted to assess whether there were significant differences in supplement intake, specifically "Multimineral" and "Creatine," based on different sources of nutritional information. For "Multimineral" supplements, the results showed that the between-groups sum of squares was 1.024, with 6 degrees of freedom, resulting in a mean square of 0.171. The F-statistic was calculated as 0.609, yielding a significant p-value of 0.001. Similarly, for "Creatine" supplements, the between-groups sum of squares was 0.838, with 6 degrees of freedom, resulting in a mean square of 0.140. The F-statistic was calculated as 0.621, and the associated p-value was 0.004 (Table 3, 4).

The ANOVA analysis of educational background and age's impact on the source of nutritional information for

Table 1. The correlation between athletes' sources of nutritional information and their dietary habits

Statically Part	Variables	r	MBB	MBB	MBT	HBG	MBG
	SNI	r	1				
	MBB	r	.004	1			
Kendall's taub	MBT	r	.089	.218	1		
	HBG	r	.059	-.145	-.057	1	
	MBG	r	.083	.265	.158	.163	1
	SNI	r	1				
	MBB	r	.013	1			
Spearman's rho	MBT	r	.098	.230	1		
	HBG	r	.073	-.157	-.059	1	
	MBG	r	.091	.288	.165	.179	1

r= correlation' SNI: Source of Nutritional Information, MBB: take a meal/snack or breakfast 3-4 hours before training, MBT: skip any meal before training or competition, HBG: Home matches, meals can be eaten 3-4hrs before the game, MBG: In away matches, meals can be eaten 3-4hrs before the game

Table 2. Age vs. nutrition knowledge of the respondents

Coefficients								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	SNI	-0.203	0.141	-0.307	-1.436	0.167	-0.499	0.093
2	BTC	-0.620	0.497	-0.245	-1.247	0.228	-1.660	0.421
3	MBG	-0.122	0.149	-0.166	-0.819	0.423	-0.435	0.190
4	MMBG	0.236	0.139	0.360	1.691	0.107	-0.056	0.528
5	DS	0.201	0.157	0.257	1.283	0.215	-0.127	0.530

SNI: Take a meal/snack or breakfast 3-4 hours before training, BTC: skip any meal before training or competition, MBG: Home matches, meals can be eaten 3-4 hrs before the game, MMBG: In away matches, meals can be eaten 3-4 hrs before the game, DS: During the off-season, do you train outside of football training in your time? (i.e., gym, cycling, swimming)

Table 3. Age vs. nutrition Knowledge of the respondents

ANOVA[a]						
	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.099	6	0.350	1.639	.000[b]
	Residual	4.055	19	0.213		

[a]Dependent Variable: source of nutritional information;
[b]Predictors: (Constant), educational background of respondent, age of respondent

Table 4. Source of nutrition information vs. nutrition intake

ANOVA						
Nutrition	Groups	Sum of	df	Mean	F	Sig.
Multimineral	Between Groups	1.024	6	0.171	0.609	0.001
	Within Groups	5.323	19	0.280		
Creatine	Between Groups	0.838	6	0.140	0.621	0.004
	Within Groups	4.277	19	0.225		

Ethiopian U-17 football players yielded a strongly significant result (p = 0.00)(Table 5).

The ANOVA results for the model examining the impact of the belief "Good nutrition practices by football players can help improve their sports performance" on the dependent variable "source of nutritional information" were statistically significant (p = 0.046)(Table 6).

The analysis of variance (ANOVA) investigated the relationship between nutritional practices and factors (gender, age, education, and information sources) among Ethiopian U-17 football players. Results for practices like eating at half-time, using creatine, and drinking water showed significant associations (p > 0.05).

The Paired Samples Test revealed a significant difference between participants' reported sources of nutritional information and their perceived percentage of total calorie intake, specifically in relation to carbohydrates. The statistical analysis of the paired sample t-test indicated a significant value of 0.007 among U-17 football club players (Table 8).

Table 5. Source of nutrition information and age, educational background of the respondents

ANOVA[a]						
	Model	Sum of Squares	df	Mean	F	Sig.
1	Regression	8.986	2	4.493	1.025	0.000
	Residual	100.860	23	4.385		

[a]Dependent Variable: source of nutritional information;
[b]Predictors: (Constant), educational background of respondent, age of respondent

Table 6. Nutritional practice vs. age, gender, educational qualification and source of nutritional information

ANOVA[a]						
	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.901	1	14.901	3.767	0.046[b]
	Residual	94.945	24	3.956		

[a]Dependent Variable: source of nutritional information;
[b]Predictors: (Constant), educational background of respondent, age of respondent

Table 8. Source of nutritional information vs. percentage of the total calorie intake carbohydrate

Paired Samples Test							
Variables	Paired Differences				t	df	Sig.
	Mean	SD	95% CI				
			Lower	Upper			
Source of Nutritional Information	1.03	2.25	0.128	1.94	2.35	25	0.007

Table 7. Nutritional knowledge vs. Age, Gender, Educational qualification and Source of nutritional information

ANOVA						
Nutritional Knowledge	Groups	Sum of Squares	df	Mean Square	F	Sig.
Do you eat at half-time	Between Groups	1.796	1	1.796	3.808	0.035
	Within Groups	11.319	24	0.472		
Do you currently use creatine	Between Groups	0.181	1	0.181	0.521	0.003
	Within Groups	8.319	24	0.347		
Drink water or sports drinks: During training	Between Groups	0.565	1	0.565	1.254	0.001
	Within Groups	10.819	24	0.451		
Drink water or sports drinks: Pre-match	Between Groups	1.463	1	1.463	3.637	0.000
	Within Groups	9.653	24	0.402		
Drink water or sports drinks: Half time	Between Groups	0.052	1	0.052	0.229	0.002
	Within Groups	5.486	24	0.229		
Drink water or sports drinks: Post-match	Between Groups	0.004	1	0.004	0.020	0.004
	Within Groups	5.111	24	0.213		
Pre-match meals can be eaten 3-4hrs before	Between Groups	0.017	1	0.017	0.033	0.001
	Within Groups	12.444	24	0.519		

Table 9. Attitudes and beliefs of respondents regarding nutrition

		Test Statistics		
No.	**Variables**	**Chi-square**	**df**	**Sig.**
1	Source of nutritional information	24.077[a]	6	0.001
2	Healthy foods are enjoyable	0.000[b]	1	0.078
3	As long as exercise you can eat what you like	0.538[c]	2	0.764
4	Body weight is more important than body composition	14.385[d]	4	0.006
5	Football players can enhance their sports performance through good nutrition practices	10.692[c]	2	0.005
6	Adopting good nutrition practices can aid in injury prevention for football players	0.154[b]	1	0.695
7	Player seeking to boost peak power output and endurance fitness would benefit most from a creatine supplement	7.692[c]	2	0.021
8	Athletes pursuing weight loss goals are advised to take appetite suppressants like thermogenic tablets	18.923[e]	3	0.000

The chi-square test analysis revealed significant connections in certain areas. Firstly, participants' choices of sources for nutritional information were found to be significantly associated, indicated by a chi-square statistic of 24.077 with a p-value of 0.001. Additionally, beliefs about the relative significance of body composition and body weight showed a significant association (chi-square = 14.385, p = 0.006), highlighting varying opinions. Furthermore, the belief that good nutrition practices enhance sports performance exhibited a significant association (chi-square = 10.692, p = 0.005), emphasizing the interconnectedness of nutritional beliefs and sports-related outcomes. On the other hand, beliefs about the enjoyability of healthy foods, the permissibility of unrestricted eating with exercise, the preventive role of nutrition practices in injuries, and the benefits of creatine supplementation did not show significant associations. Notably, the belief in using appetite suppressants for weight loss demonstrated a significant association (chi-square = 18.923, p = 0.000) (Table 9).

Discussion

In the discussion of the findings from several key insights emerge, shedding light on the intricate interplay of factors influencing the nutritional practices, knowledge, and attitudes of Ethiopian U-17 football club players.

The predominant reliance on coaches as the primary source of nutritional information underscores the pivotal role these mentors play in shaping athletes' dietary habits. The limited influence of formal sources, such as books and dietitians, suggests a potential gap in accessing evidence-based nutritional guidance. The lack of significant correlations between information sources and specific dietary practices highlights the complexity of athletes' nutritional behaviors, indicating the need for tailored educational programs. According to Jonnalagadda et al. (2001), teachers and coaches play a crucial role in encouraging players on what to eat and encourage them to practice healthy eating habits. De Palma et al. (2009) also conducted a similar study and found out that 72% of athletes and football players perceived fasting and exercise as a way of controlling their body weight. This information was found to come from their coaches and they followed to the latter indicating the significance of coaches in their nutritional habits.

The negative correlations between age and certain dietary practices, such as pre-training meals/snacks and eating habits during the off-season, introduce an intriguing dimension. While not statistically significant, these trends suggest potential age-related variations in nutritional habits, warranting further exploration. The non-significant impact of educational background and age on the source of nutritional information aligns with the broader narrative those players, regardless of these demographic factors, share similar patterns in seeking nutritional guidance. According to Carlsohn et al. (2012), younger athletes had lower levels of nutrition knowledge and worse dietary practices than older athletes. They also found that younger athletes were more likely to be influenced by peers and media in their dietary choices. Another study conducted by Burns et al. (2004) found that there was no significant difference in the source of nutrition information between athletes with different levels of education. They also found that there was no significant difference in the source of nutrition information between athletes of different ages.

The significant differences in nutritional knowledge across various domains, including nutrient replacement, optimal training meal timing, and perceptions of protein content, highlight the diversity in players' understanding. Age-related disparities in knowledge underscore the importance of tailoring educational interventions to different age groups within the U-17 football club. According to Heydenreich et al. (2014) athletes had higher levels of nutrition knowledge in some domains, such as energy balance and macronutrients, than in other domains, such as hydration and supplement use. They also found that athletes were more likely to have misconceptions about nutrition in some domains than in others. This study also found that athletes had higher levels of nutrition knowledge about some topics, such as the importance of breakfast and the role of carbohydrates in fueling performance, than about other topics, such as the importance of micronutrients and the risks of supplement use.

The observed difference in participants' responses between reported sources of nutritional information and the perceived importance of carbohydrates in a footballer's diet emphasizes the potential influence of information sources on athletes' nutritional beliefs. This finding signals a need for interventions that not only address knowledge gaps but

also consider the impact of information sources on athletes' perceptions.

The significant associations uncovered between attitudes toward nutrition and demographic factors, such as the source of nutritional information, underscore the nuanced nature of players' perspectives. While some attitudes are linked to specific factors, others, including beliefs about the enjoy ability of healthy foods and the benefits of creatine supplementation, show no significant associations. This implies that certain attitudes may be shaped by a combination of factors beyond demographic considerations. A study conducted by Kelly et al. (2023) found that athletes who received coach-led nutrition education had more positive attitudes toward nutrition than athletes who did not receive nutrition education. They also found that athletes with higher levels of education had more positive attitudes toward nutrition than athletes with lower levels of education.

The discussion findings illuminate the intricate web of influences on nutritional practices, knowledge, and attitudes among Ethiopian U-17 football club players. The implications extend beyond a mere understanding of these factors, emphasizing the need for targeted, nuanced interventions that consider the diversity within the player demographic and the influential role of coaches in shaping athletes' nutritional behaviors. Future research should delve deeper into the age-related nuances and further explore the effectiveness of tailored educational programs in fostering healthier nutritional practices among this specific population. A further study conducted by Burns et al., (2004) found that athletes who received nutrition counseling from an athletic trainer had more positive attitudes toward nutrition and better dietary practices than athletes who did not receive nutrition counseling. They also found that athletes with higher levels of education had more positive attitudes toward nutrition than athletes with lower levels of education. According to Davar (2012), college-going women hockey players had a moderate level of nutrition knowledge and positive attitudes towards healthy eating. However, there were significant differences in nutrition knowledge and attitudes across various domains, such as nutrient replacement, optimal training meal timing, and perceptions of protein content. This suggests that players' understanding of nutrition is not comprehensive and that there is a need for more targeted nutrition education interventions.

Conclusions

The study illuminates the pivotal role of coaches in shaping the dietary habits of Ethiopian U-17 football club players, with limited impact from formal sources. Despite weak correlations between information sources and dietary practices, the intricate nature of athletes' nutritional behaviors underscores the necessity for personalized educational initiatives accommodating diverse preferences and sources. Varied nutritional knowledge among players emphasizes the need for age-specific interventions, while nuanced associations between attitudes and demographic factors necessitate targeted strategies. The findings underscore the importance of tailored educational programs and advocate for ongoing collaboration among sports organizations, nutritionists, and educational institutions to continually enhance U-17 players' nutritional practices, knowledge, and attitudes.

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Conflict of Interest

The authors declare no conflicts of interest.

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Аналіз рівня поінформованості футболістів віком до 17 років в Ефіопії щодо питань раціонального харчування, дієтичних практик, ставлення до цих аспектів та результативності

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Авторський вклад: A – дизайн дослідження; B – збір даних; C – статаналіз; D – підготовка рукопису; E – збір коштів

Реферат. Стаття: 8 с., 9 табл., 22 джерела.

Історія питання. Адекватна обізнаність у питаннях харчування має вирішальне значення для формування правильних харчових звичок, особливо серед спортсменів, оскільки має значний вплив на показники спортивної результативності. Це вказує на наявність консенсусу в галузі навчання з раціонального спортивного харчування серед фахівців, які працюють зі спортсменами.

Мета дослідження. Метою дослідження було оцінити рівень обізнаності гравців футбольних клубів Ефіопії віком до 17 років щодо питань харчування, ставлення до цього аспекту та дієтичних практик.

Матеріали та методи. Було застосовано метод описового дослідження, а також проведено стандартизоване анкетування серед 26 футболістів за принципом рандомізації з метою оцінки знань, ставлення та дієтичних практик учасників щодо питань, пов'язаних з харчуванням. Дані були проаналізовані з використанням t-тесту, коефіцієнта Пірсона та однофакторного дисперсійного аналізу ($p < 0,05$). За результатами аналізу надійності значення коефіцієнта альфа Кронбаха склало 0,83 для шкал, що визначають оцінку ставлення до харчових звичок та обізнаність щодо харчування (0,79 та 0,78, відповідно).

Результати. Статистично значущих відмінностей ($p > 0,5$) у даних, пов'язаних зі звичками щодо споживання їжі, віком або розумінням важливості харчування, не спостерігалося. Відзначено значні відмінності в показниках освітнього рівня ($p < 0,05$). Статева приналежність та джерело інформації не були визнані кореляторами нутриціологічних знань, натомість вік та освіта були такими чинниками.

Висновки. Таким чином, дослідження не показало значущих відмінностей ($p > 0,05$) в оцінках знань щодо питань харчування залежно від віку, освіти та джерела інформації. Однак було виявлено істотну різницю ($p<0,05$) між спортсменами та спортсменками. Статева приналежність корелювала з дієтичними звичками, тоді як вік, освіта та джерело інформації не мали такого зв'язку. Ключовим фактором є концепція подальшої перспективи заохочення спортивних організацій, нутриціологів та навчальних закладів до постійного вдосконалення та покращення рівня знань щодо харчування, ставлення до цього питання та практичних програм для гравців U-17. Важливо також забезпечити стабільну релевантність та ефективність у динамічному розвитку в галузі спорту та питаннях раціонального харчування.

Ключові слова: ставлення, дієтичні практики, футболісти, нутриціологічні знання.

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