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Nutritional Knowledge of Ethiopian Long Distance Runners

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Abstract: This study was aimed to assess nutritional awareness of Ethiopian long distance runners of first division clubs and a cross sectional study design was employed. There are a total of 716 athletes in the first division and among these 257 samples were selected using stratified sampling technique. Further, standardized questionnaire was used to collect data from these samples and the data generated was analysed using SPSS software version 20.0. In the standard score of nutritional assessment, the nutritional knowledge of Ethiopian long distance runners was found with 52.5% in the poor category. The researcher also used one sample t test, and the result showed that their knowledge of sport specific nutrition was significantly below the average. ($t = -14.169, P < .05$). This shows that the long distance runners have poor nutritional knowledge in their respective sport. Therefore, in order to boost their nutritional knowledge, the concerned bodies need to provide them with necessary sport nutrition awareness education.

Key words: Nutritional Knowledge, Long distance runners, sport specific nutrition, Nutritional Education.

1. Introduction

Long distance running is one of the athletics events which cover races at distance from 5000m to marathon (42 km), cross country and road races. Those runners face special challenges in training and competition, requiring a unique combination of endurance and stamina, and both implement a dynamic continuum in training volume, duration and intensity, which utilizes all energy producing pathways and muscle fibre type^[1].

Athletes need to be aware of their nutritional goals and of how they can select an eating strategy to meet those goals. Diet may have its biggest impact on training, and a good diet will help support consistent intensive training while reducing the risk of illness or injury. Good food choices and a regular meal pattern can also promote adaptations in muscle and other tissues in response to the training stimulus. They must be aware of foods that are good sources of macro and micro nutrient and make these a focus of their diet. Well-chosen diets can meet an athlete's nutrient needs, but that requires knowledge of different nutrients and meal composition^[2].

Athletes need to understand the role and importance of both macro and micronutrients, while realizing the timing of nutrient ingestion is equally important. Portion size, nutrient balance and hydration are also critical aspects of proper sports nutrition. Additionally, while many athletes are concerned with their pre-competition meals, the effect of daily nutritional intake on training ability has far greater impact on their athletic performance.

An International Olympic Committee consensus statement on sports nutrition^[2] stated that: The amount, composition and timing of food intake can profoundly affect sports performance. Good nutritional knowledge will help

athletes to choose and take, appropriate food which helps to recover quickly and adapt more effectively with less risk of illness and injury. Understanding the right foods contribute not only to success in sport, but also to enjoyment of life." However, physically active individuals might encounter numerous barriers regarding healthy eating, including deficits in nutrition knowledge, vegetarian or restricted dietary intake, or participation in excessive exercise^[3]. Therefore, the current study was aimed to assess Ethiopian long distance runners' nutritional knowledge.

2. Methods

The study sample includes senior long distance athletes in division one clubs, from three reigns that is Addis Ababa, Oromiya and SNNP by using stratified sampling techniques, and the sample size were(N= 257). In this cross sectional descriptive survey study, standardized closed-ended questionnaire was administered to assess the nutritional knowledge of Ethiopian senior long distance runners^[4, 5, 6]. Then one sample t test also used in order to check the significant level. The questionnaire contained knowledge questions about macro, micro and fluids and data was analyzed using descriptive statistics such as frequency and cross tabulation. All statistical analysis was performed with the use of SPSS for windows (version 20).

3. Results

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A total of 24 questions were raised to test athletes' actual knowledge of sport nutrition on four scoring methods major areas; macro nutrient, micro nutrient, water and sport drinks. Scores were computed for each section and graded. Four point rating scale was then used to grade the scores and results presented in percentage, frequency, and t test for significance. The grading was done as follows: Excellent \geq

80%, Good 60%-79% = Average 40%-59% = Poor \leq 39. Based on this score, more than average respondents (52.5%)

were found in the category of poor nutritional knowledge. (See table 1 below).

Table 1: Assessment of Nutrition Knowledge

Standard score	Frequency	Percent
Excellent >80%	Nil	Nil
Good 60-79%	10	3.9
Average 40-59	112	43.6
Poor <39	135	52.5
Total	257	100.0

(Source: Survey data, 2017)

Table2: One-Sample t- test to check athlete's knowledge

N	Mean	SD	Test Value = 50		
			t	Df	Sig.
257	39.45	11.92	-14.169	256	.000

(Source: Survey data, 2017)

The knowledge scores out of 100 were used to test the significance of the participant's knowledge compared to 50% using one sample t test. The result shows that their knowledge of sport specific nutrition was significantly below the average. ($t = -14.169$, $df = 256$, $P < .05$).

4. Discussion

Findings of the study indicated that Ethiopian senior athletes have low knowledge 80 (52.5 %) of sport nutrition. This result is similar to the findings of a study carried out in India^[7] conducted an assessment of nutritional status, nutritional knowledge and impact of nutrition education among selected sports persons and that of Kenyan^[8] described the nutrition knowledge, dietary intake and nutritional status of elite athletes. In this study, results showed that only 8.4% females had normal nutritional status (BMI 18.5), the remaining majority being either moderately or severely malnourished. The study established also that dietary intake was inadequate. The energy (kcal) intake indicated that 22.2% males and 33.3% females had above the recommended dietary intake. The researcher concluded that the nutritional knowledge possessed by the athletes was low, their nutritional status was poor and their dietary intake of the essential nutrients especially carbohydrates, protein, calcium and iron was below the recommended, showing that the overall situation mean score were low.

The findings were also comparable to a study conducted in America, among college soft ball players findings of which indicated the nutrition knowledge scores of the player was 36%, and 65% of the player were failed the test, which is low nutritional knowledge. Similar studies conducted in Iran elite college athletes^[9] studied nutritional knowledge and attitudes of elite College Athletes. showed comparable results. Their study was designed for understanding the nutrition knowledge and attitude of elite college athletes. Based on their result the knowledge of Iranian college athletes was moderate, and these suggest that nutrition knowledge and attitudes of Iranian college athletes need to improve.

The finding of this study however, contradicts those of a similar study, carried out among Indian professional

sportsmen, which indicated knowledge levels of athletes were high in athletes than football and volleyball. This is maybe supported by professionals; they may have continuous seminar or workshops^[11]. Similarly studies carried out in Italian adolescent female athletes with non athletes, the results showed that athletes quite higher nutrition knowledge than non athletes adolescent female the reason is that they get nutrition information from their coaches and through training^[4].

Though Ethiopian long distance senior runners' knowledge of sport specific nutrition was established to low, it is comparable to athletes of other nations like Indian, American, Italy and Kenya. This dispels the notion that Ethiopian athletes are nearly ignorant of their sport specific nutrition, or are poorly informed than other nations may be due to financial problems in each clubs to higher professionals for their dietary advice. There were about four common sources of nutrition knowledge among senior athletes. These include nutritionists, coaches, internet, and fellow athletes. Nonetheless, effort made to improve knowledge of nutrition of athletes to empower them to inform about their nutrition at any time of training and competition. It can also be noted that the athletes scored poorly in knowledge of nutrition and more than half of them had inadequate knowledge on their food.

5. Conclusion

Ethiopian senior long distance runners did not take optimum amount of balanced diet and does not have a good eating habit for their performances and their coaches focussed only on their physical training rather than their nutritional advice, which means they exposed for injuries and their health too. Therefore different short trainings, seminars and work shop should be provided to their runners in order to create awareness about sport specific nutrition. There is no nutritionist and trainers in all clubs so the concerned bodies should assign professionals in order to support the athletes, in

addition to this experienced sportsperson and trainers should pursue ways to educate young people on how to select nutritious foods that will promote a lifetime of good health.

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