

Patterns of Nutrition and Sport Supplements Use in Young Egyptian Athletes: A Community-based Cross-sectional Survey

Safaa Tawfik ¹, Nehal El Koofy ², Eman Mohamed Ibrahim Moawad ^{2*}

¹ National Nutrition Institute

² Department of Pediatrics, Faculty of Medicine, Cairo University



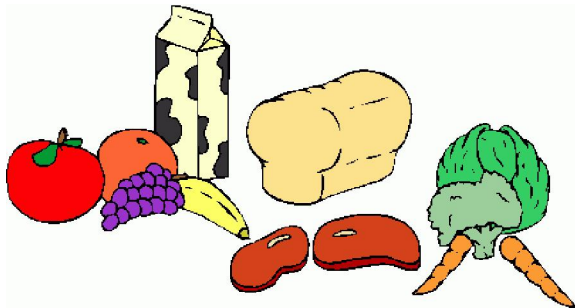
Nutrition & Sport

- Good nutritional knowledge and adequate nutrient intake have been perceived as the key components that play a basic part in enhancing athletic performance



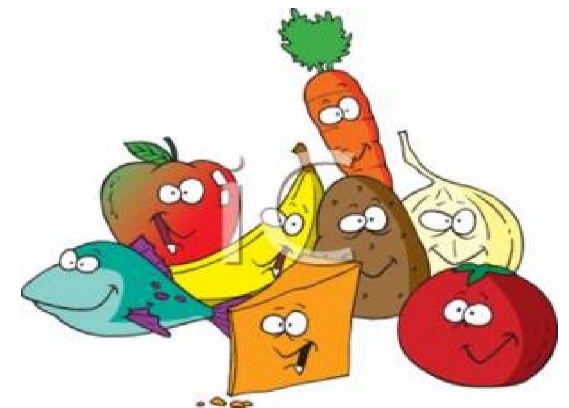
Nutrition & Sport

- Many associations reported that physical activity, athletic performance, and recovery from exercise are enhanced by optimal nutrition



Adolescents sports and nutrition

- In adolescents, the energy demands are increased and vary based on gender and level of physical activity.
- Nutrition is an important part of sport performance for young athletes, in addition to allowing for optimal growth and development.



Nutritional knowledge among adolescents

- Most of them are unable to make appropriate nutritional choices due to poor dietary knowledge and education. **Jacobson et al,1991.**



Supplements and athletes

- Large number of children and adolescent athletes currently use at least one or more of sport supplements to boost their athletic performance.
- The prevalence rates of supplement use among athletes were estimated to range from 32% to as high as 90%. Calfee & Fadale, 2006

Suzic Lazic J, et al., 2011



Nutrition and sport supplement

- Few studies on nutrition and sport supplement use in young athletes available from developing countries.
- Adolescents from such communities receive much less attention and insufficient resources of nutrition information, with subsequent misjudgment of health-related choices.





- The present study aimed to assess dietary pattern, knowledge, attitudes, and practices of sport supplementation as well as perspectives of young Egyptian athletes.

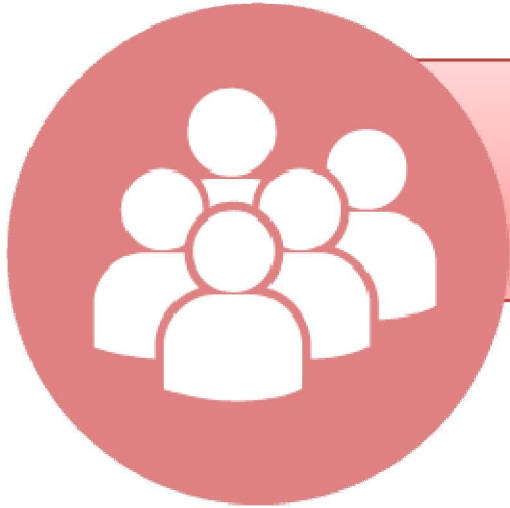
Methodology

A cross-sectional
descriptive survey design .

Included a convenience
sample of young athletes
gathered from four non-
profit sport clubs and two
fitness centers

Methodology

- The sport clubs and the fitness centers represent different demographic regions in Greater Cairo governorate, between January to May 2015.



Participants

- 358 Egyptian adolescents aged 13-18 years, recruited from 16 different sports are included.



Inclusion criteria

Adolescents

Both sexes

Should train ≥ 4 hours per week for the preceding 6 months

Not with special needs

Agreed to answer the questionnaire

Participants were categorized into



Ball game,



Endurance,

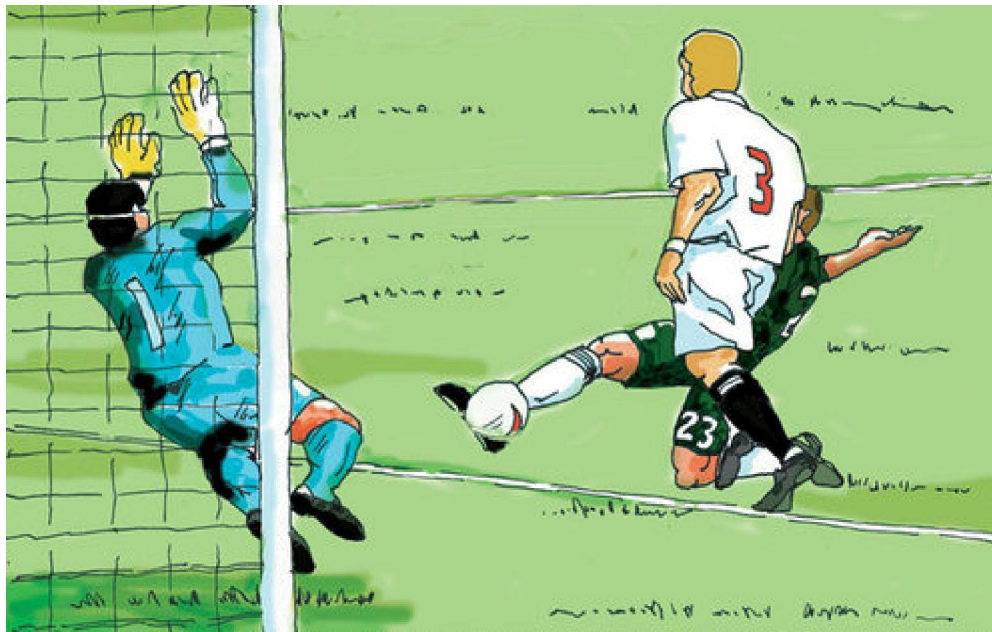


weight class or weight loss ,



and anti-gravitation or antigravity sports.

- In terms of popularity, football is the most prevalent sport disseminating among the Egyptian community





Investigators

- A trained team of five investigators at "National Nutritional Institute" were recruited to collect the relevant information from the young athletes.
- A workshop was held to train the study investigators how to implement the survey activities in the practical field.
- A brief standard manual was provided to the field investigators that clarified how to present instructions to participants and answer questions about individual items.



- Data were collected using a structured interview questionnaire adapted from previously validated work and published literature.
- A preliminary small-scale pilot study was conducted on 55 young athletes before executing the field survey. Based on the received feedback, some questions were modified to fit the study requirements.



- The new questionnaire was reviewed.
- Further suggested changes were made and the questionnaire was approved to serve as the data-gathering instrument.
- The questionnaire consisted of 30 questions, divided into four main parts.

Items of the questionnaire

First

- Detailed demographic and personal information

Second

- Short assessment of dietary behavior during training and off-season periods.

Third

- measure athlete's knowledge of sports nutrition and sources of these nutrition information

questionnaire

- To ensure the quality control on all phases of data collection, completed questionnaires were submitted and checked for missing information on a daily basis. Feedback was provided to research supervisor before the next day's field study

Results

First

Participants demographic data

	Total respondents (n= 358)	
	n	%
Gender		
Males	202	56.4
Females	156	43.6
Age^a (yr)	14.3 ± 2.5 (13-18)	

Sport category

Ball games	131	36.6
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Endurance	129	36
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Weight class	104	29
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Anti-gravitational	20	5.6
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The years of practice ranged from 0.5 to 12 years with an average of 4.6 years.

The study young athletes spent an average of 2.8 hours weekly on training

BMI

Lean (less than 20 kg/m ²)	61	21.1
Normal (20-25 kg/m ²)	171	59.2
Overweight (25-30 kg/m ²) or obese (> 30 kg/m ²)	57	19.7

Second :Distribution of responses of young athletes to basic nutrition ,knowledge and behavior

Meals

	Yes	
	n	%
What are your fixed meals?		
Breakfast	281	78.5
Lunch	312	87.2
Dinner	304	84.9



Snacks

Number

	Yes	
	n	%
Do you have any snacks?	337	94
Once	113	33.5
Twice	114	33.8
≥ three times	110	32.7

Site

	Yes	
	n	%
Where do you usually have snacks?		
Home	89	26.4
Outdoor	248	73.6

Healthy vs. Unhealthy snacks

Snacks



Fast food

Do you have fast food every week?	313	87.4
Once	181	57.8
2-3 times	105	33.5
> 3 times	27	8.6

Third :Distribution of responses to knowledge and attitude of young athletes to sport nutrition

	Agree	Disagree	Unsure
Can dehydration affect performance?	224 (62.6)	102 (28.5)	32 (8.9)

In your opinion, which of the following is considered as sport supplement?

Sport drinks 83%

Vitamins and minerals 52%

Herbs 21%

Creatine 80%

Thermogenic products 30%

What is the best you take ?

Before the event

- Water
- CHO
- Multivitamins
- Caffeinated energy drinks

During the event

- Fresh fruit juice
- Energy drinks
- Soda containing drinks

After the event

- Proteins
- Carbohydrates
- Energy drinks

Hydration

- A majority of participants were more adherent to sports hydration guidelines for pre-, during, and post-event. Although, sport drinks were the most supplement frequently consumed, however the rate of consumption was lower than expected in our study.

Fourth :Distribution of responses to attitude and practice of young athletes to sport nutrition

- Do you currently take dietary supplements?

Yes	175	48.9
No	183	51.1

What is the main reason of using supplements?

Physical appearance	159	90.9
Better performance	146	83.4
Tolerating pain	116	66.3
Improving concentration	104	59.4
Peer pressure	94	53.7
Not harmful	72	41

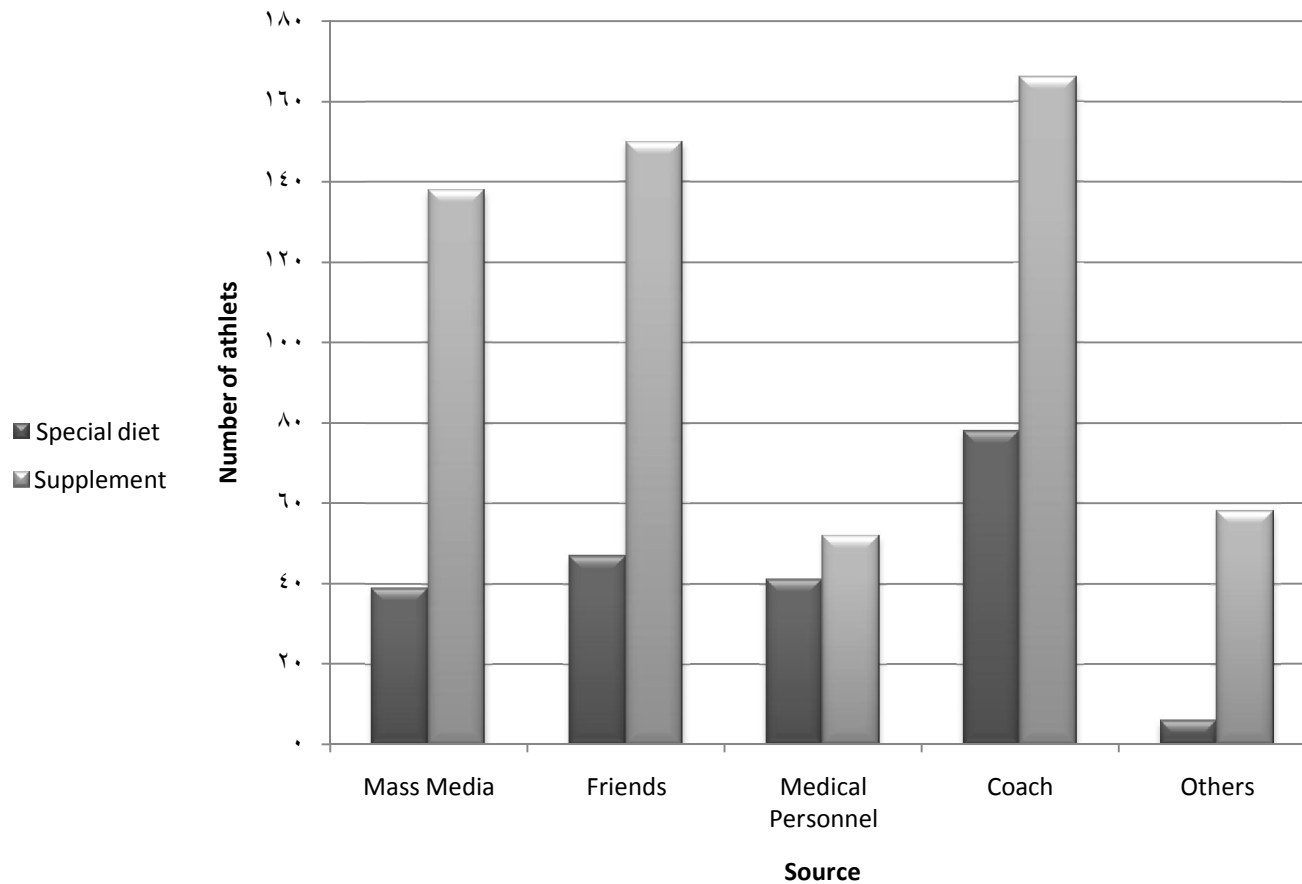
Where do you get the sports supplements?

	n= 175	
Pharmacy	89	50.9
Retail store	137	78.3
Athletic trainer	135	77
Sport centers	144	82.3
Supermarkets	87	49.7
Others	48	27.4

How long have you been taking these supplements?

Regularly	35	20
Days	29	16.6
Weeks	34	19.4
During competition	77	44

Source of knowledge of the special diet and supplements





- Two-thirds of our study participants have recognized different types of ergogenic aids, however, only caffeine-supplement consumption had been agreed by 40% of the athletes.

Important study limitations should be addressed

- Small sample size which may be not sufficient to interpret the real extent of the level of dietary knowledge, behavior and attitude among adolescent athletes.
- All study participants were allocated from one governorate (Greater Cairo).

However

- To the best of our knowledge, this is the first Egyptian study that utilized an adolescent population with an age range that encompasses puberty and early stages of adulthood as well as a varied type of sports.

Conclusion

- Egyptian young athletes have at least one fixed meal, adequate snacking habits, and adherent to hydration guidelines.
- Like other countries, adolescent athletes respond frequently to fast food offers.
- Sport drinks, vitamins and minerals were the most supplements consumed

Conclusion

- Pattern of basic nutrition of young athletes was quite satisfactory, while, sport nutrition skills and knowledge were below average