



## IMPACT OF NUTRITION EDUCATION ON NUTRITIONAL STATUS OF ATHLETES IN RURAL AREA

**Dr. Santhi Sree Sunkara**

Assistant Professor (Contract), Dept. of Home Science,  
Sri Padmavathi Mahila Visvavidyalayam, Tirupati, India.

### ABSTRACT

*Nutrition plays an important role for attaining high level of achievement in sports and athletics, besides other factors such as motivation, skill, techniques, commitment, physical fitness and training. The important phase of life for acquisition of empowering knowledge and skills through Nutrition Education may play a crucial role to be addressed by meeting them essential nutrients. Dissemination of Nutrition Education to school athletes and integrating with School Curriculum may be beneficial to improve athletic performance. There is dearth of information about the impact of school-based health-nutrition education on athletic activities in school children. The present study was contemplated to design and provide Nutrition Education to the athletes of school children of Tirupati rural. The sample size comprised of sixty children with the age range of 7 to 13 years. The finding of the study implicated a positive impact on Nutrition Education to the selected school athletes as evidenced by significant improvement in haemoglobin levels and knowledge scores. Thus inclusion of suitable Nutrition Education as part of school curriculum may be useful to enhance their athletic performance.*

### INTRODUCTION

Nutrition plays a very important role in attaining high level of achievements in sports. Nutritional status has a direct bearing on the level of physical performance. Hence, physical fitness and training are very much dependent on nutritional status of sports personnel. Nutrition is an important component of any physical fitness program. The main dietary goal for active individuals is to obtain adequate nutrition to optimize health and fitness or sports performance. This is not only important to help to improve performance but also to promote healthy dietary practices in the long term. So, a reasonable strength and condition program

and a well balance diet must be presented as a sensible alternative to a riskier, shortcut mind set.

A reasonable strength and condition program and a well balance diet must be presented as a sensible alternative to a riskier, shortcut mind set. Young athletes have more nutritional needs because of physical activity and physical development. Optimal athletic performance results from a combination of factors including training, body composition, and nutrition. Physical fitness and training are very much depended on nutritional status of sports personnel. Diet significantly influences the performance of athletes.

There is strong evidence that appropriate selection of nutrients, timing of intake and proper supplement choice are associated with optimal health and exercise performance regular physical activity (PA) can alter the requirements for some micronutrients. This makes it important to choose foods carefully, taking into account the quality and quantity of macro nutrient intakes, since requirements can vary depending on the type of exercise performed.

Health and nutrition education is fad to enhance the level of awareness of individuals and thereby bring about a change in their behaviour for the protection and promotion of their health and well being. It was been well accepted that increase in the health and nutrition knowledge in the community is an effective strategy to enhance child survival rate.

It has identified that samples in the age group of 7-13 years school going children are highly prone to deficiency disorders, hence there is need to educate about nutrition and deficiency disorders, the prevalence of deficiency disorder is principal subject of many epidemiological research carried out in our country. These deficiency disorders ate more common among school going children.

Physical activity has much to offer the athlete and non-athlete alike. It provides recreation good for the body and soul; it doesn't have to cost anything and it benefits almost everyone. At its best physical activity is play with happy consequences for health and well-being. As long as there is activities people enjoy doing there's an "athlete" in everyone.

Three major factors affect physical performance: Genetics, training and nutrition. The first gives some people in innate edge in printing or endurance, and nothing can be done about it. The second is acknowledge as a basic truth . most athletes know a good bit about

proper training and trick is to follow the right plan. The third is often ignored or when taken seriously, misunderstood.

Nutrition has important effects on physical performance, but athletes often purely understand the of legitimate role of nutrition and coaches like. Athlete's lack of knowledge may make them vulnerable to phony nutrition claims and bad dietary advice. It leaves some coaches wishing they had taken college course on nutrition.

Few areas of nutrition is as infiltrated with food fads as nutrition of athletes. Diet fads are dangerous to athletes. They induce the athletes to consume some foods, which are assumed to possess special nutritional properties as against foods of proven nutritive values. Special foods are costly while being not superior to common athlete article of diet and hence drawn away the financial resources of the individual and practices of diet faddism makes the individual less respective to sound scientific concepts of nutrition.

## **METHODOLOGY**

Athletes need a wide range of nutrients to perform various functions in the body and to lead a healthy life. However, many of them are not aware of appropriate foods to be taken to meet the nutritional demands. Suitable Nutrition Education is very important to educate them and to improve their performance. Based on this background the present study was undertaking to study the impact of Nutrition Intervention of Athletes in Tirupati Rural.

Tirupati Rural was selected as a Study Area. It is not only a famous Pilgrimage Centre but also it is focal point for Education, which is evident by the presence of Six Universities and a Medical college. There are 22 schools present in Tirupati rural area consists of all classes of students. Out of 22 schools, 3 schools viz., Tummala gunta Panchayat School, Upparapalli panchayat school and Mutyala Reddy palli panchayat school were selected for the purpose of the study.

## **RESULTS AND DISCUSSION**

The well-known fact that many food fads and fallacies prevail among adolescents regarding food intake and athletic performance. To overcome this confusion, suitable Nutrition Education programme is necessary to disseminate the relevant knowledge. In view of this, the Nutrition education is carried out and the results are discussed under the following sub-heads.

## HAEMOGLOBIN LEVELS

Nutritional Anaemia is caused by the absence of dietary essentials, (either Iron or Folic Acid or Vit. E or Vit. C or Vit B<sub>12</sub> ) involved in haemoglobin formation or by poor absorption of these dietary essentials. Primary school can be the most important strategic place to foster healthy life styles and valuable second front in war against ill health and malnutrition (Gopalan, 1992).

Consequences of improper nutrition intake in adolescence can jeopardize growth and hinder puberty. It may also lead to an increase in fractures and anemia as well as a lack of energy to perform in athletic competitions (Cotugna, 2005). Therefore, it is essential for school athletes to receive appropriate Nutrition Education.

The impact of Nutrition Education is studied by pre and post evaluation of haemoglobin levels. The efficacy of education programme is tested statistically and the results obtained are presented in the table no. 1.

**Table:1. Impact of Nutrition Intervention approach on school going Athletes**

| Ho   | SIZE OF THE SAMPLE                       | MEAN                          | Zo   | Zt at 5% LEVEL OF SIGNIFICANCE | INFERENCE   |
|--|--|-------------------------------|------|--------------------------------|---|
| X' and $\bar{y}$ are not significantly different | n <sub>1</sub> =60<br>n <sub>2</sub> =60 | X'=9.72 g/dl<br>Y'=10.17 g/dl | 1.73 | 1.96                           | *Significant at 5% level<br>*Nutrition Education Intervention had Impact on Mean Haemoglobin Levels |

**Note:** X' = Mean Score of Haemoglobin before giving Intervention

Y' = Mean Score of Haemoglobin after giving Intervention

The data from the table indicated that there was significant improvement in haemoglobin levels after Nutrition Intervention Programme. The difference was at five percent with mean changes in haemoglobin from 9.72 to 10.17g/dl. Thus there was an impact clinically which showed a positive impact of Intervention Programme among Athletes.

## NUTRITION KNOWLEDGE

Nutrition knowledge is necessary for the school going children as it would have an impact on the children's food choices. Hence the present study aimed at providing Nutrition

Education Programme and the impact is evaluated through Nutrition Knowledge scoring. The pre and post test results statistically checked are denoted in table no 2.

Sleet (1985) carried out a study to assess the effect of two nutritional card games on the children attitudes towards knowledge about human nutrition. The results of the study illustrate that selective nutrition games, when used in a judicious fashion can significantly improve knowledge.

**Table :2. Comparison of Nutrition Knowledge before and after Intervention**

| <b>Ho</b>                                  | <b>SIZE OF SAMPLE</b> | <b>MEAN</b>          | <b>Zo</b> | <b>Zt at 5% LEVEL OF SIGNIFICANCE.</b> | <b>INFERENCE</b>  |
|--|-----------------------|----------------------|-----------|--|---|
| X' and y' are not significantly difference | n1=60<br>n2=60        | X'=56.71<br>Y'=65.53 | 11.45     | 1.96                                   | Not accepted indicating Nutrition Intervention had impact in improving knowledge significantly. |

**Note:** X=Mean Score of the Nutrition Knowledge before Intervention

Y=Mean Score of the Nutrition Knowledge after Intervention

From the above data it is clear that the two mean scores are significantly different. The mean score for Nutrition Knowledge after Intervention is greater than the mean scores of the Nutrition Knowledge before Intervention. Therefore the Nutrition Education given is effective. The findings illustrated a definite need of appropriate Nutrition Education to enhance their performance.

## **CONCLUSION**

As a result the nutrition intervention, vegetable intake improved. This generates hope that a nutrition education program is beneficial in this particular population. An improved nutrition knowledge and dietary intake can positively impact sport performance resulting in more competitive high school sport teams. Additionally, improving the diets of adolescents may help reduce nutrient deficiency related to injuries, such as stress fractures. Moreover, improving the diets of adolescents can establish a foundation for a healthier future reducing the risk of diet related illnesses such as obesity and diabetes.

Careful consideration should be taken when developing a nutrition education program for adolescent athletes. Coaches and parents should be more intimately involved due to their

substantial role for facilitating change. Educational materials should be presented to adolescents emphasizing motivational and practical knowledge that focus on improving performance and weight control. Finally, the intensity of the intervention should also be maximized.

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