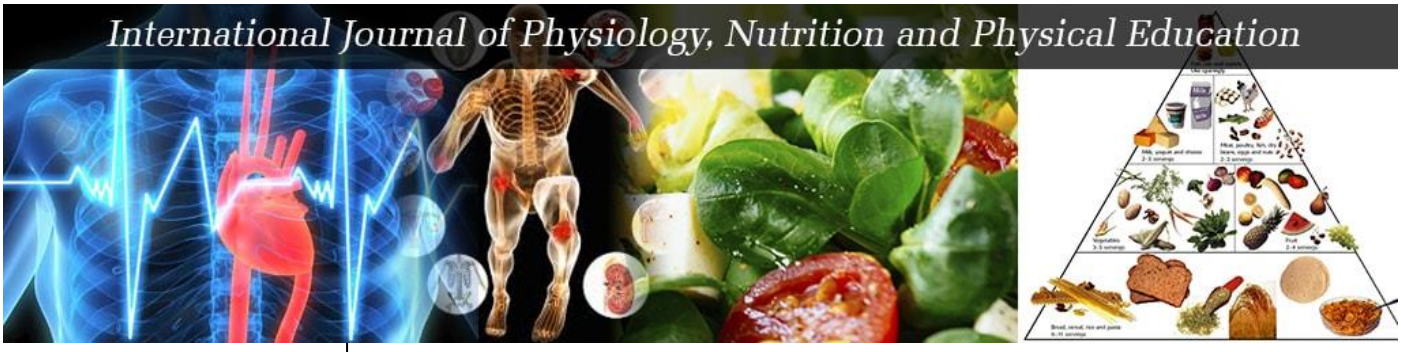

ISSN: 2456-0057
IJPNPE 2019; 4(1): 1385-1387

www.journalofsports.com
Received: 25-11-2018
Accepted: 27-12-2018

Dr. A Anbumalar
Lecturer in Nutrition & Dietetics Department of Physical Education Annamalai University, Annamalai Nagar Chidambaram, Tamil Nadu, India

K Kokila
M. Sc, Dietician Department of Physical Education Annamalai University, Annamalai Nagar, Chidambaram, Tamil Nadu, India

Correspondence
Dr. A Anbumalar
Lecturer in Nutrition & Dietetics Department of physical Education Annamalai University, Annamalai Nagar Chidambaram, Tamil Nadu, India

Analysis of Body mass index and dietary practices/Food preferences of physical education students at Cuddalore district in Tamil Nadu

Dr. A Anbumalar and K Kokila

Abstract
Successful athletic performance is combination of good physical fitness, proper training and a sensible approach to nutrition. Sports person needs good quality food and fitness. Without the right kind and proportion of foods to balance body's nutrient needs even the physical conditioning and expert coaching do not suffice to bring out the best. Adequate nutrition is vital to peak athletic performance. Nutritional needs of the athletes must be met by proper balanced diet for better performance. Studies show that proper nutrition for young athletes is critical not only to their athletic success, but more importantly to their growth, development and overall health, hence athletes must fuel their bodies with the appropriate nutritional foods to meet their energy requirements in competition, training and recovery. A descriptive cross sectional study has been carried out in Chidambaram town, Cuddalore district, Tamil Nadu among physical education students of 19- 20 years in Annamalai University. Totally 114 students were included for the study. Students with chronic diseases were excluded and students, willing to participate were included for the study. The result of this study proved that, some of the sports girls and boys are underweight. Dietary practices / Food preferences of most of the sports girls were not in adequate level. Nutritional education to create awareness and Nutritional supplementation to improve their food habits are the significant point to be focused for the good health and better performance of sports persons.

Keywords: Body mass index, dietary practices, food preferences, physical education students

Introduction
Nutritional status of sports persons play an important role in attaining a high level of achievement in sports. In the Assessment of nutritional status, Body mass Index (BMI) is one among the main indicators. 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 (Beals & Manore, 1998) [5].

Food provides the source of essential elements and building blocks to synthesize new tissue, preserve lean body mass, optimize skeletal structure, repair existing cells, maximize oxygen transport and use maintain favorable fluid and electrolyte balance and regulate all metabolic processes, hence optimal nutrition forms the foundation for physical performance.

Successful athletic performance is combination of good physical fitness, proper training and a sensible approach to nutrition. All sports people require a balanced diet with an appropriate intake of carbohydrate, protein and fat. During the sports training, the energy requirement of the players is high as such the diet should be accordingly planned otherwise the players will not have the stamina to withstand the training and the player will show the signs of fatigue which may result in internal and external injuries to the players.

Sports person needs good quality food and fitness. Without the right kind and proportion of foods to balance body's nutrient needs even the physical conditioning and expert coaching do not suffice to bring out the best. Adequate nutrition is vital to peak athletes must be met by proper balanced diet for both performance.

Objective of the study
To find out the Body mass index and Dietary practices/Food preferences of physical education students from Annamalai University.

Need for the study

Sports has become one of the most challenging and competitive profession in the world. Sports involve national sentiments and pride. In India the sports performance is not optimum compared with other countries. One of the several reasons is lack of essential nutrition. Dietary deficiency that adversely affects the health of the individual is likely to impair an individual's physical performance. Poor sports performance could be partly due to poor physique and unsatisfactory physical fitness resulting from under nourishment. Studies show that proper nutrition for young athletes is critical not only to their athletic success, but more importantly to their growth, development and overall health, hence athletes must fuel their bodies with the appropriate nutritional foods to meet their energy requirements in competition, training and recovery.

Methodology

A descriptive cross sectional study has been carried out in Chidambaram town, Cuddalore district, Tamil Nadu among physical education students of 19-20 years in Annamalai University. Totally 114 students were included for the study. Students with chronic diseases were excluded and students, willing to participate were included for the study. Among the total 114, Seventy nine boys and thirty five girls were included. The anthropometric measurements of the students were recorded by standard procedures. The weight of each student was measured using a standard digital scale to the nearest 0.1 kg and height of the students was measured to the nearest 0.1 cm from the measured weight and height values Body mass index was calculated using the formula, Weight in kg

$$\frac{\text{Height in m}^2}{\text{and compared with World Health Organization (WHO) standard values.}}$$

Dietary practices / Food preferences of the selected students was assessed using a questionnaire. Totally 35 girls were included to assess the dietary practices / food preferences.

Results and Discussion

BMI values of selected students

S. No.	BMI	Girls	Percentage	Boys	Percentage
1	Underweight	0.7	20	13	16
2	Normal	28	80	66	84
3	Overweight	-	-	-	-
4	Obese	-	-	-	-

It is elucidated from the table that 20 percentages of girls and 16 percentages of boys were Underweight. 80 percentages of girls and 84 percentages of boys were normal. Body mass index is commonly used to classify an individual's body weight. However in the case of athletes, who may have a high body weight due to higher lean body mass, BMI may lead to misclassification of athlete as overweight or obese. In the present study, No one lies in the category of overweight or obese.

Dietary practices / Food preferences of the selected girls

Diet is playing a vital role among sports persons for illness prevention, health protection, health promotion and better performance and to enhance the efficiency. Among the selected girls 31% of girls were missing their meals and primarily 64% of girls were missing their breakfast. Carbohydrate loading has evidence based support of being both ergogenic and safe (Juhn, 2002) [2]. Meals are main source for carbohydrates. Majority of the girls are having the practice of missing meals, hence 20 percent of underweight girls will be under this category. Underweight girls have reduced glycogen storage. Glycogen stored in the liver and active muscle supplies most of the energy for intense aerobic exercise, hence there is a great need of glycogen for sports persons.

Among selected girls 89% of girls were prefer homemade foods and only 11% of were prefer outside foods. While preferring foods for snack time, majority of the girls prefer deep fat fried items and minimum girls were prefer fruits. Though the girls prefer high calorie deep fat fried items, the energy expenditure is higher in physical education students, hence energy saved in the body is minimum or nil. While taking outside (hotel) foods, most of the girls (65%) order rice based items. Only minimum girls (12%) were order poori and parota items and 3% of girls were order chappathi and 20% of girls order noodles. 20% of girls were not having a practice of taking milk based beverages and 80% of girls were having a practice of taking coffee, tea, milk. Milk has both casein and whey protein. The combination may be particularly helpful for athletes. Research shows that whey protein is absorbed quickly, which can help speed recovery immediately after an event. Casein is digested more slowly helping to ensure long term recovery of muscle after a grueling event. (Balbinder Singh 2018) [1].

Among the selected girls 90% of girls were prefer fresh fruit juice and 10% of girls were prefer carbohydrate beverages. 46 % of girls were not having a practice of eating sundal and 20% of girls were eating once a week and 25% of girls were eating twice a week and 3% of girls were eating thrice a week and 6% girls were eating more than thrice a week and none of the students were eating sundal daily. It has long been known that adequate protein is needed for tissue maintenance and recovery and is especially important in aesthetic sports or any situation in which to minimize catabolism of lean tissues. (Phillips, 2014) [6]. 30% of girls were not even consuming vegetables once a week. Only 9% of girls were consuming once a week and 6% of girls were consuming thrice a week and 55% girls were consuming daily. Regarding the consumption of greens 48% of girls were not even consuming once a week. Only 17% of girls were consuming once a week. 35% of girls were consuming twice a week.

Regarding the consumption of eggs, only 3% of girls were consuming daily. 63% of girls were consuming once a week. 20% of girls were consuming twice a week. 14% of girls were consuming thrice a week. Regarding the consumption of Non vegetarian foods, majority (60%) of girls were consuming once a week and 40% of the girls were consuming twice a week. Regarding the consumption of curd/buttermilk only 40% of girls were consuming daily. Athletes and all those exposed to oxidative stress may benefit from the ability of these probiotics to increase antioxidant levels and neutralize the effects of reactive oxygen species (Carroll Lutz & Karen przytulski, 2010) [3]. Optimal nutrition improves physical activity, athletic performance and recovery from exercise, whether one exercises recreationally or trains as a competition athlete. Consuming adequate food and fluid during, before and after exercise does several things: maintains blood glucose, maximizes performance and improves recovery time. (Balbinder Singh, 2018) [1].

Conclusion

The result of this study proved that, some of the sports girls and boys are underweight. Dietary practices/Food preferences of most of the sports girls were not in adequate level. Nowadays women are entering the sports area and competing equally with men. Inadequate frequency of consumption related to various food items result in low energy and essential nutrient intake in female athletes and it will be a major nutritional concern, it can lead to fatigue and reduced sports performance. If the nutritional needs are not met, there is an increased risk of health issues among the female sports persons. Hence Nutritional education to create awareness and Nutritional supplementation to improve their food habits are the significant point to be focused for the good health and better performance of sports persons.

References

1. Balbinder Singh. Sports nutrition and Weight management, Friends publications, 2018, 2-20.
2. Juhn MS. Ergogenic aids in aerobic activity, Currsports med Rep. 2002; 1:233
3. Carroll Lutz, Karen Przytuiski. Nutrition and Diet Therapy, Evidence based Applications 4th Edition, Jaypee publishers Medical publishers (p) Ltd. 2010, 338-341.
4. William D, Ardle MC *et al*. Sports and Exercise Nutrition, 4th edition, Published by Lippin cott Williams & wilkins, 2013, 393-400.
5. Beals KA, Manore MM. Nutritional status of female athletes with subclinical eating disorders. JAM Diet Assoc. 1998; 98:419-425
6. Phillips SM. A Brief review of higher dietary protein diets in weight loss. A focus on Athletes. Sports medicine. 2014; 44:149-153
7. Srilakshmi *et al*. Exercise physiology fitness and sports nutrition, published by New age international publishers, 2017.