GAVIN PUBLISHERS

Yoga Practice and Physiotherapy

Singh TN, et al. Yoga Practice Phys Ther 2017: J102.

DOI: 10.29011/YPTR-102. 000002

Research Article

An Assessment of Body Mass Index among State Level Male Volleyball Players

Thingnam Nandalal Singh[1*], Wangkheimayum Geetarani Devi[1], Umesh Bhatt[2]

[1]Department of Physical Education, Punjab University, Chandigarh, India

[2]Department of Volleyball Coach, Tender Heart School, Chandigarh, India

[*]**Corresponding author:** Thingnam Nandalal Singh, Punjab University, Chandigarh, India, Tel: +91 9463129148

E-mail: nandalal_th@yahoo.co.in

Citation: Singh TN, Devi WG, Bhatt Umesh (2017) An Assessment of Body Mass Index Among State Level Male Volleyball Players. Yoga Practice Phys Ther 2017: J102. DOI: 10.29011/YPTR-102. 000002

Received date: 29 December, 2016; **Accepted date:** 21 March, 2017; **Published date:** 28 March, 2017

Abstract

The main purpose of the study was to compare the Body Mass Index (BMI) among different age groups of State level male volleyball players of Chandigarh (India). To achieve the objective of the study, a total of sixty (60) male volleyball players of different three age categories were selected purposively as the subjects of the study. Subjects were selected from Chandigarh State volleyball tournaments of different age categories i.e., under-14, under-17 and under 19. The age of the subjects ranged between 12 to 19 years. BMI was calculated by the following formula: Body Mass Index (BMI) = weight in kilograms / (height in meters)^2. Weight was measured in nearest a kilogram and height was measured in nearest a centimeter. To determine the significance difference on body mass index (BMI), analysis of variance (ANOVA) was computed with the help of SPSS software. The level of significance was set at 0.05. Statistical calculation on gathered data showed that there was significant difference found on body mass index (BMI) among different age groups of state level male volleyball players.

Keywords: Body mass index; State level; Volleyball player; Male

Introduction

Society is fast changing People are too much busy in their work that they do not get time to do any physical work which result in imbalance in their physique and health. They eat lot of junk food and do not physical work. We are enjoying lot of luxuries provided by advanced technology development on one hand facing lot of physical, mental, emotional and social disturbance on the other hand. This has resulted in the high incidence of obesity, cardiac disease and diabetes. People are under stressed, and situations are more stressful, people would be able to cope with such condition in order to remain balance. It has been well established the approximately 80% of the illness were experienced today are the result of poor lifestyle decision. The amount and type of exercise we get, the nutritional habits we established the ability to manage stress and other personal habits [1]. Body weight issues are not solely about food intake, but are about food intake in relation to a no. of other factors; a sedentary lifestyle, heredity, advertising that promotes food products, lack of guidance regarding proper nutrition, confusing information about the effects of food on health and well-being, the custom of using body shape as a measure of social desirability, and hectic stressful lifestyle. In such a complex environment the over availability of food allows it to be used for a variety of reasons other than to provide nutrients and emerge for life. Body fat is composed of two parts: essential fat-fat necessary for normal physiological functioning, such as nerve conduction and storage fat. Essential fat constitutes about 3% to 7% of body weight in men and about 10% to 12% of body weight in women storage fat also called depot fat, constitutes only a small percentage of the total body weight of lean individuals. And 5% to 25% of the body weight of the majority of the population. Obesity is the term for storage fat exceeding about 30% of body weight.

BMI provides a simple numeric measure of a person's thickness or thinness, allowing health professionals to discuss weight

problems more objectively with their patients. BMI was designed to be used as a simple means of classifying average sedentary (physically inactive) population, with an average body composition (WHO Technical Report Series 854).The BMI is an attempt to quantify the amount of tissue mass (muscle, fat, and bone) in an individual, and then categorize that person as underweight, normal weight, overweight, or obese based on that value. However, there is some debate about where on the BMI scale the dividing lines between categories should be placed. Commonly accepted BMI ranges are underweight: under 18.5 kg/m2, normal weight: 18.5 to 25, overweight: 25 to 30, obese: over 30 [2]. According to Miller [3], BMI provides an indication of the relationship of weight to height. The BMI has been found to correlate with health risk. However, and can be used as a screening tool when body fat estimates are not available. Body Mass Index (BMI) is a simple index of weight-for-height that in commonly used to classify underweight, overweight and obesity. It is defined as the weight in Kilograms divided by the square of the height in meters Kg/m2.

Objective of the Study

The objective of the study was to compare the body mass index among different three age groups (under-14, under-17 and under-19) of state level male volleyball players of Chandigarh (UT), India [4-7].

Methodology

For the purpose of the study, sixty (60) state level male volleyball players of different age categories i.e., under-14, under-17 and under-19 were selected as subjects of the study by using purposive sampling technique. The age of the subjects ranged between 12 to 19 years. BMI was calculated by the following formula: Body Mass Index (BMI) = weight in kilograms / (height in meters)². Weight was measured in nearest a kilogram and height was measured in nearest a centimeter. To find out the significance differences among state level volleyball players on body mass index, Analysis of Variance (ANOVA) was applied with the help of SPSS software [8]. For testing hypothesis, the level of significance chosen was 0.05.

Results and Findings

Descriptive analysis of body mass index among different three age groups of state level male volleyball players is presented in table-1.

Variable	Source of Variance	Sum of Squares	DF	Mean Square	F	Sig.
Body Mass Index	Between Group	135.97	2	67.985	8.372	0.001
	Within Group	454.731	56	8.12		
	Total	590.701	58			

*Significant at .05 level

$F_{.05}$ (2, 56) =3.15

Table 2: Analysis of Variance among State Level Male Volleyball Players on Body Mass Index

Table 2 clearly indicates that there was significant difference among state level male volleyball players on body mass index since the F obtained at .05 levels was 8.372 whereas the tabulated value is 3.15. Mean scores of different age groups of state level male volleyball players on body mass index are depicted graphically in (figure-1).

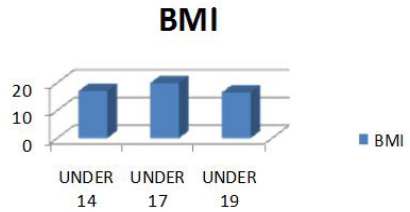

Figure 1: Graphical Representation of Mean Scores of State Level Male Volleyball Players on Body Mass Index

Conclusion

In the light of the findings and limitations of the present study the following conclusion was drawn:

- There was significant difference obtained on body mass index among state level male volleyball players of different age categories i.e., under-14, under-17 and under-19.

References

1. Gangopadhyay SR (2002) "Physical Education Today and Tomorrow". Friends Publication, Delhi.
2. Malcolm K (2012) "Why being 'overweight' means you live longer: The way scientists twist the facts".
3. Miller DV (2006) "Measurement by Physical Educator why and How". McGraw-Hill companies, New York.
4. World Health Organisation (2006) "BMI Classification". Global Database on Body Mass Index. Retrieved July 27.2014.
5. World Helath Organisation Technical Report Series 854 (1995). "Physical Status: the Use and Interpretation of Anthropometry" PMID 8594834.
6. Wilson KJW, Ross JS (1987) "Anatomy and Physiology in Health and Illness". Edinburgh: Churchill Livingstone.
7. Larry K, Wilmore HJ, Costile LD (1994) "Physiology of Sport and Exercise". Human Kinetics. United state of America.
8. Powers SK, Dodd SL (1996) "Total Fitness: Exercise, Nutrition and Wellness" (2nd Edition). Allyn and Bacon: London