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ORIGINAL RESEARCH

The Effect of Different Sport Branches on Body Fat Percentage

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Abstract

In recent studies, in the number of overweight children among children in ten age groups reported to be increase due to the unbalanced lifestyle.

Surplus foods we eat all the carbohydrates, fats and proteins that turned into fat tissue into storage. Anatomical and physiological functions, the fat must be a certain amount should be in every healthy individual is one of the basic elements. Should have a minimal amount of fat in the body is considered to be a biological threshold. Reported that an individual's health could be compromised when drops below this threshold.

Research, in different sports (volleyball, soccer, basketball, and athletics) was carried out on subjects in sporting activities.The sample size of the universe known to work using the sample formula, the 155 athletes in different sports activities to be planned.

Different branches of sport for athletes with sports activities, physical and anthropometric characteristics examined in this study, the size and weight of athletes in volleyball sports branch, sporting activities, sports activities with the athletes in other sports disciplines were significant differences between height and weight. Athletics athletes in the sports branch, sporting activities included in the study received an average length of 170 ± 8 cm and average weight 55.9 ± 8.6 kg. Measurement of the thickness of subcutaneous fat from triceps area of 8.7 ± 3.8 mm, measured from the biceps region of 5.7 ± 3.2 mm in thickness of subcutaneous fat, subcutaneous fat thickness of the subscapular region measured 10.5 ± 1.7 mm, the thickness of subcutaneous fat taken from the measurement region Suprailiac 8.8 ± 2.4 was measured in mm. Basketball in the field of sports activities for athletes 165 ± 16 cm in average height, average weight 55.2 ± 17.2 kg.

As can be seen on the results of our study population of teen-age inactivity and excessive fat in the body will lead to health problems later in life and keep them under control in terms of decrease, in the age of basic education in our society to be useful in directing the young generation industry in volleyball carry his faith.

Key Words: Body Composition, Body fat percentage, skinfold, Anthropometric, Sports branches

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INTRODUCTION

In recent studies, in the number of overweight children among children in ten age groups reported to be increase due to the unbalanced lifestyle (1).

Surplus foods we eat all the carbohydrates, fats and proteins that turned into fat tissue into storage. Anatomical and physiological functions, the fat must be a certain amount should be in every healthy individual is one of the basic elements. Should have a minimal amount of fat in the body is considered to be a biological threshold. Reported that an individual's health could be compromised when drops below this threshold (2).

The monitoring of changes in fat-free mass and fat in the body's energy metabolism and body composition describes the effect of various diseases. With this information, occurs more effective diet and exercise program. Weight training increases the weight of muscle and bone; resist the reduction made by restricting calories. In addition to low and moderate aerobic exercise and weight; increased or introduced in order to reveal the movement and use of energy (3).

Sports activities are an important actor in the pre-pubertal and pubertal stage of the children located in a healthy and balanced form of growth. İn puberty stage, a balanced diet is, do regular exercise, and get the necessary sleep for the body, and flexibility, coordination of movement is found in sporting activities increases gradually durability and strength, it would be much growth and development of adequate and would have the genetic reach the physical structure (4).

Volleyball, football, basketball, swimming, to be obtained from athletes in different sport such as athletics comparing the results of the measurement of body fat percentage, the individual holding in body fat percentage of the normal range to determine the effectiveness of this sport in contributing to the healthy and especially essential to address more closely the effectiveness of volleyball targets (5).

MATERIAL METHODS

Research in different sports (volleyball, football, basketball, and athletics) was performed on the subjects contained in sporting activities.

During the study, consisting of open-ended questions, two or more elective place receives a semi-structured questionnaire questions, demographic characteristics, habits and included questions related to nutritional status. The survey was conducted by face to face

interviews. Athletes, sport, age, gender, body weight, height measurements, BMI, the number of people living at home, a survey club that parents' occupation and included questions about demographic characteristics of the study cases were performed with the help of trainers.

Athletes used in research to measure and assess the body composition Lange skinfold Caliper (Beta Tecnology Incorporated CAMBRIDGE MARYLAND) subcutaneous athletes with error ± 2 mm thickness were measured with instruments oil from four different regions. These measurements, triceps, biceps, subscapular and suprailiac were taken from the region.

Statistical analysis: Statistical evaluation was done with SPSS 12.0 computer program. Non-parametric test Kruskal-Wallis test for multiple comparisons between groups were used. Parametric data in t tests to compare variables in the two groups, the nonparametric Mann-Whitney U-test data, chi-square test was used in the analysis of categorical variables. Data were expressed as mean ± SD. $P < 0.05$, values were considered significant.

RESULTS

The examination of physical and anthropometric characteristics in which athletes in sporting activities in different sports were presented at table 2 results at 3 and Figure 1. Compared the demographic features of the athletes who participate in sports activities to sport, the age of the basketball and volleyball athletes is very low, but the height and weight of volleyball players were found to be minimal. (Figure 1) ($p < 0.0001$).

According to sports branches athletes who participate in sports activities, after subscapular and to measure subcutaneous fat thickness in suprailiac, most lubrication in the intergroup comparison of measurements wrestling, kickboxing and was observed in similar sports ($p < 0.0001$), (Table 1).

Table 1. A comparison of the demographic findings of athletes according to their branches

	ATHLETICS	BASKETBALL	SOCCER	WRESTLING ETC.	VOLLEYBALL	**P**
	n=11	n=39	n=36	n=11	n=58	
AGE	20.5±2.3	14.3±1.8	22.3±3.3	21.2±5.7	13.5±2.6	<0.0001
HEIGHT	170±8	165±16	177±6	173±7	158±10	<0.0001
WEIGHT	55.9±8.6	55.2±17.2	67.5±7.2	66.4±11.1	45.4±8.9	<0.0001
TRICEPS	8.7±3.8	10.5±3.6	7.1±2.3	11.6±2.8	8.8±2.9	<0.0001
BICEPS	5.7±3.2	6.9±2.4	4.1±1.3	6.6±2.0	5.7±2.1	<0.0001
SUBSCAPULAR	10.5±1.7	10.5±3.2	9.8±2.1	11.4±2.4	7.3±2.3	<0.0001
SUPRAILIAC	8.8±2.4	9.2±4.0	5.0±1.8	10.7±3.3	5.9±2.1	<0.0001

Compared the demographic features of the athletes who participate in sports activities to sport, the age of the basketball and volleyball athletes is very low, but the height and weight of volleyball players were found to be minimal. The players in the basketball and wrestling biceps and triceps subcutaneous fatty tissue most while subscapular and suprailiac most wrestling and so on. While in the player, it was at least volleyball and soccer. This also suggests that sporting activities have made reflects the positive effects on the relevant muscle tissue ($p < 0.0001$), (Table 2).

Table 2. A comparison of categorical variables athletes according to sectors

	ATHLETICS	BASKETBALL	SOCCER	WRESTLING ETC.	VOLLEYBALL	**P**
	N (%)	N (%)	N (%)	N (%)	N (%)	
Gender						
Girl	6	26	1	5	39	<0.0001
Male	5	13	35	6	19	
Education						
Primary education	0	20	1	0	42	<0.0001
High school	11	19	27	7	15	
University	0	0	8	3	1	
Income						
Minimum	6	36	29	10	42	=0.097
Normal	5	3	7	1	16	
Nutrition						
Insufficient	9	36	26	10	40	=0.239
Balanced	2	3	10	1	18	
Total	**11**	**39**	**36**	**11**	**58**	

When taken in suprailiac subcutaneous fat thickness variables examined in all branches of sports; Athletics, Basketball and Wrestling branches located in the branch with sportive activities in football and volleyball branches found in sporting activities was observed significant differences between athletes (p 0.0001), (Table 3).

Table 3. A comparison of the demographic findings of athletes according to their branches

	ATHLETICS	BASKETBALL	SOCCER	WRESTLING ETC.	VOLLEYBALL	**P**
	n=11	n=39	n=36	n=11	n=58	
AGE	20.5±2.3	14.3±1.8	22.3±3.3	21.2±5.7	13.5±2.6	<0.0001
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WEIGHT	55.9±8.6	55.2±17.2	67.5±7.2	66.4±11.1	45.4±8.9	<0.0001
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SUBSCAPULAR	10.5±1.7	10.5±3.2	9.8±2.1	11.4±2.4	7.3±2.3	<0.0001
SUPRAILIAC	8.8±2.4	9.2±4.0	5.0±1.8	10.7±3.3	5.9±2.1	<0.0001

DISCUSSION

Measurement and evaluation of subcutaneous fat thickness; It is being conducted by various researchers on sports that individuals in a variety of sports that our work and our findings are discussed below synthesized.

Akin et al in their researchs had been done in a different sports branches found in athletes place in the football branches average height 177.8 cm average weight of 74.3 kg, subcutaneous region triceps fat thickness of 6.9 mm, biceps 5.3 mm supscapu 9.4 mm, was found to be suprailiac 11.4 mm. Located in wrestling athletes with the same variables as well; height 171 cm, weight 79.7 kg, 6.9 mm triceps, biceps, 3.8 mm, 9.4 mm supscapu was measured suprailiac 4.11 mm. The measurements of these variables; Weightlifting athletes in the branches and in the order, length 166.1 cm, weight 77.8 kg, 7.2 mm, triceps, biceps, 6.95 mm, 17 mm supscapu, they measure 26.9 mm suprailiac. Handball branch in one of the athletes in the same variables respectively; height 184.8 cm, weight 84.3 kg, triceps 9.8 mm, biceps 4.7 mm, supscapu 13.9 mm suprailiac 12.3 mm ölçmüşler.araştırıcı body handball in terms of the amount of fat and weightlifting branch located athletes, football more skin of

athletes in wrestling and taekwondo branch had determined that they have the subcutaneous fat tissue. Researchers football branches located athletes Triceps, the skinfold thickness taken in the region biceps and suprailiac, our study to get the football industry in athletes triceps, subcutaneous regions biceps and suprailiac is similar to fat thickness (6).

The research has made the Kimm and his friends; childhood and adolescence in black and white ethnic origin in children have shown that there are significant relationship between physical activity and body fat percentage. Increase physical activity and suggest that the evidence that led to the reduction of body fat percentage (7). Therefore, to prevent the alleged lubrication result of this research, it proposes the research resulting from body fat percentage it is good advice on the most effective sport.

Moreno and friends in their researches in football branch of athletes who participate in sports activities and the research they have done in the reference group; They observed that the UN is an important difference between the two groups of variables (8).

These results also support the results of our thesis.

CONCLUSIONS AND SUGGESTIONS

When Thus, considering our results presented in our study, our modern, especially the green areas of the municipality with the urban area, the creation of site-style residential areas and the National Education and Higher Education Institutions volleyball fields, gardens and green areas; Diyarbakir province has the potential to help contribute to significant social implications in the south-eastern region will provide physical and mental development of children, especially girls, although her sex appeal to both men. Because the sports culture and the spirit of amateur sports no personal ego and ability of the individual, especially the sense of discipline while at the same time in group sports such as volleyball and sharing the task of salvaging human values such as solidarity; It can be reduced to the basic training in the first year.

The next time process between the South East region of Diyarbakir, especially young people, began the task of sharing and solidarity environment in the first years of basic education will grow with each passing day and this development; an important stakeholder approach to the solution of the problem and to emphasize our common values is another conclusion that it offers us the results of our work.

As it can be understood from the discussion section of this study; It covers the five sports of volleyball though, compared to other industries, especially basic education as a priority in years to introduce young people to advise and demonstrated the need.

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