147 - THE INFLUENCE OF THE DATE OF BIRTH IN ANTHROPOMETRIC VARIABLES OF YOUNG SOCCER IN THE INFANT CATEGORY, UNDER-15.

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INTRODUCTION

According to a survey conducted by the Federation Internationale de Football Association (FIFA), maximum body of worldwide soccer, there are around 240 million people practicing the sport regularly throughout the world. As in many sports, football brings together individuals by age, in order to match the competition. However, considering only the chronological age of individuals can cause inequality in training, and also decrease the number of opportunities for some. That's because specific factors of growth and development of each young person, contributes to the great variability of somatic growth, and major physical, situated chronologically between individuals in the same sports category (FIGUEIREDO, 2001). In the infant category, where the athletes have chronological ages between 13 and 14.9 years, the differences cannot be limited only to the years under regulation, but the differences are not fully explained by the chronological age. Therefore, the purpose of this study is to see if the birth date has influence in anthropometric variables, for young soccer players, included in the infant category, under-15.

METHODOLOGY

The sample was composed of 34 male athletes, aged 14 (n = 18) and 15 (n = 16) years, members of soccer teams from Curitiba. The variables considered in this study were: chronological age (CI), anthropometric variables - body mass (CM), height (EST), body composition (% fat) and BMI. The descriptive statistics was used to measure the average and standard deviation. The *t* test was used to detect possible significant differences between groups of athletes born in the 1st and 2nd year of the category.

Table 1: Distribution of the sample studied by subgroups

Category	Subgroup	n
Infant	G14	18
Infant	G15	16

RESULTS AND DISCUSSION

The G14 groups with Chronological Age (JI) average 14.55 ± 0.25 and G15 with IC average 15.49 ± 0.25 showed significant differences with p <0.01.

Table 1: mean and standard deviation for variable chronological age

	G 14 (n=18)		G 15 (n=16)	
Variables	**Avg.**	**dp**	**Avg.**	**dp**
I.C.	14,55**	0,25	15,49**	0,25

Table 2 shows the values of EST, MC, BMI of body fat% of the total sample analyzed.

Table 2: Minimum, Maximum, average and standard deviation for the anthropometric variables of the entire sample.

	Total (n=34)			
Variables	**Min**	**Max.**	**Avg.**	**sd**
Height	158,00	186,00	173,97	6,24
Weight (kg)	42,00	80,80	64,32	8,91
BMI	16,81	26,19	21,20	2,34
% of Fat	8,67	13,19	10,46	1,00

No significant differences were observed for variable stature in subgroups. However, group 15 presented an average of 15 times larger than group 14 (Table 3). With respect to body mass, there is significant difference between subgroups, p <0.01 (Table 4). We perceive that the average body mass of 15 shows well higher than the average of group 14. Although it was not significantly different in varying stature, there is high degree of variation for BMI, P <0.01, of groups (Table 5). This fact can be explained by the significant difference observed in the variable body mass: where Group 15 shows up with an average of this variable, largely exceeding Group 14. Regarding the percentage of body fat, there is significant difference between both groups, with an average of just over Group 15 slightly higher than of Group 14 (Table 6).

Table 3: Average, standard deviation and *t* test for the stature of the subgroups.

	EST		
Subgroups	**Avg.**	**sd**	t
G14 (18)	172,27	6,81	-1,72
G15 (16)	175,87	5,08	

Table 4: Average, standard deviation and *t* test for body mass of the subgroups.

		Body Mass		
Subgoups	**N**	**Avg.**	**sd**	***t***
G 14	18	59,69**	8,68	-3,81
G15	16	69,53**	5,88	

** p<0,01

Table 5: Average, standard deviation and *t* test for BMI subgroups.

		IMC		
Subgroups	**N**	**Avg.**	**sd**	***t***
G 14	18	20,07**	2,31	-3,43
G15	16	22,47**	1,67	

** p<0,01

Table 6: Average, standard deviation and *t* test for body fat percentage of the subgroups.

		% of Fat		
Subgroups	**N**	**Avg.**	**sd**	***t***
G 14	18	10,24	0,95	-1,35
G 15	16	10,70	1,03	

In a study with young footballers of average ages between 15.9 years, Malina et al. (2000) shows that the average height of group was 174cm; in this study, which had sample with an average age of 15.0 years, the observed average height was of 173.9cm, which shows that the results were very close. Seabra et al. (2001) shows average for EST and MC (173.41 and 70.38 respectively), findings that concurred with the findings of this study. A study of soccer players in the same category, Figueiredo (2001) found an average of 16.16% percentage of fat. These figures were similar to findings by Souza (1999), where the average was 16.98%. The values found in the literature are above the ones found in this study. This fact can be explained by the difference between the equations

of the data analysis. The equations used by both studies of the literature included only with the tricipital skinfold and subscapular, which according to Figueiredo (2001) may withdraw the sensitivity to changes in fat mass. In the period of puberty, individuals may experience slight increase in fat mass (Figueiredo 2001). This assertion is contrary to the observed in this study.

Conclusion

We can conclude with this study, that the advancement of age in the category is related to a substantial increase in body mass of footballers. This difference appears to be mainly by the increase in lean body mass, since no differences were found in the EST and % fat.

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Summary

Football is one of the most practiced sports in the world. According to a survey conducted by the Federation Internationale de Football Association (FIFA), maximum body of worldwide soccer, around 240 million people practice the sport regularly throughout the world. As in many sports, football categorizes individuals by age, in order to match the competition. However, considering only the chronological age of individuals can cause inequality in training, and also decrease's the number of opportunities for some. Therefore, the purpose of this study is to see if the birth date has influence in anthropometric variables, for young footballers, included in the infant category, under-15. The sample was composed of 34 male athletes, aged between 14 (n = 18) and 15 (n = 16) years, members of soccer teams from Curitiba. The G14 groups with Chronological Age (JI) average 14.55 ± 0.25 and G15 with IC average 15.49 ± 0.25 showed significant differences with p <0.01. In anthropometric variables, no differences were observed in stature (EST) = 172.27 cm G14 and G15 = ± 6.81 cm ± 5.08 and 175.87% of fat, G14 = 10.24 ± 0.95 and G15 = 10 , 70 ± 1.03. Significant differences were observed in variables body mass (CM), G14 = 59.69 ± 8.68 and G15 = 69.53 ± 5.88 and BMI, G14 = 20.07 ± 2.31 and 22.47 ± G15 = 1.67. We can conclude with this study that the advancement of age in the category is related to a substantial increase in body mass of footballers. This difference appears to be mainly by the increase in lean body mass, since no differences were found in the EST and% fat.

Key-word: soccer, Relative Age Effect.

INFLUENCE DE L'ANNÉE DE NAISSANCE DANS DES VARIABLES ANTHROPOMÉTRIQUES DE JEUNES FOOTBALLEURS DE LA CATÉGORIE INFANTILE, SUB-15.

Résumé

Le football est un des sports plus pratiqués dans le monde. Selon une recherche réalisée par le Fédération Internationale de Football Association (FIFA), entité maxima du football mondial, environ 240 millions de personnes pratiquent ce sport régulièrement dans le monde entier. Ainsi que dans beaucoup de sports, le football regroupe les personnes par l'âge, afin d'égaler la concurrence. Néanmoins, considérer seulement l'âge chronologique des personnes peut causer des inégalités dans la formation, outre diminuer le nombre d'occasions pour quelques-uns. Donc, l'intention de présente étude a été de vérifier a influence de l'année de naissance dans les variables anthropométriques, de jeunes footballeurs, compris dans la catégorie infantile, sub-15. L'échantillon analysé s'est composé de 34 athlètes du sexe masculin, avec des âges entre 14 (n= 18) et 15 (n= 16) ans, intégrants d'équipes de football de Curitiba. Les groupes G14 avec Âge Chronologique (iv) moyen 14,55±0,25 et G15 avec IV moyenne 15,49±0,25 ont présenté des différences significatives, avec p<0,01. Dans les variables anthropométriques, n'ont pas été observées des différences dans la stature (EST) G14=172,27cm ±6,81 et G15=175,87cm ±5,08 et pour cent de Graisse, G14=10,24 ±0,95 et G15= 10.70 ±1,03. Ont été observées des différences significatives dans les variables Masse Corporelle (MC), G14= 59.69 ±8,68 et G15= 69.53 ±5,88 et IMC, G14= 20.07 ±2,31 et G15= 22.47 ±1,67. Il se conclut avec l'étude que l'avance de l'âge dans la catégorie est rapportée avec une augmentation substantielle de la masse corporelle des footballeurs. Cette différence semble se donner principalement par l'augmentation de la masse maigre, depuis n'ont pas été observés des différences dans EST et du pour cent de Graisse.

INFLUÊNCIA DO ANO DE NASCIMENTO EM VARIÁVEIS ANTROPOMÉTRICAS DE JOVENS FUTEBOLISTAS DA CATEGORIA INFANTIL, SUB-15.

Resumo

O futebol é um dos esportes mais praticados no mundo. Segundo uma pesquisa realizada pela Fédération Internationale de Football Association (FIFA), entidade máxima do futebol mundial, cerca de 240 milhões de pessoas praticam esse esporte regularmente em todo o mundo. Assim como em muitos esportes, o futebol agrupa os indivíduos pela idade, a fim de igualar a competição. Porém, considerar apenas a idade cronológica dos indivíduos pode ocasionar desigualdades no treinamento, além de diminuir o número de oportunidades para alguns. Portanto, o propósito do presente estudo foi o de verificar se há a influencia do ano de nascimento nas variáveis antropométricas, de jovens futebolistas, compreendidos na categoria infantil, sub-15. A amostra analisada foi composta por 34 atletas do sexo masculino, com idades entre 14 (n= 18) e 15 (n= 16) anos, integrantes de equipes de futebol de Curitiba. Os grupos G14 com Idade Cronológica (IC) média 14,55±0,25 e G15 com IC média 15,49±0,25 apresentaram diferenças significativas, com p<0,01. Nas variáveis antropométricas, não foram observadas diferenças na estatura (EST) G14=172,27cm ±6,81 e G15=175,87cm ±5,08 e % de Gordura, G14=10,24 ±0,95 e G15= 10,70 ±1,03. Foram observadas diferenças significativas nas variáveis Massa Corporal (MC), G14= 59,69 ±8,68 e G15= 69,53 ±5,88 e IMC, G14= 20,07 ±2,31 e G15= 22,47 ±1,67. Conclui-se com o estudo que o avanço da idade na categoria está relacionado com um aumento substancial da massa corporal dos futebolistas. Esta diferença parece se dar principalmente pelo aumento da massa magra, já que não foram observadas diferenças na EST e % de Gordura.

Palavras-chave: futebol, Efeito Relativo da Idade