51 - CARDIORRESPIRATORY FITNESS AND FAT PERCENTAGE OF YOUNG SOCCER PLAYERS OF A TEAM FROM CRATO CITY, CEARÁ-BRAZIL

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INTRODUCTION

The practice of regular physical activity should be encouraged in children and adolescents because, according to ACSM (1988) to fitness must be developed as the first goal to adopt a style of living, leading to exercise for life, with order to develop and maintain physical fitness sufficient to improve functional capacity and health. In children and adolescents, a higher level of physical activity improves the lipid profile and metabolic and reduce the prevalence of obesity. Still, it is more likely that a physically active child becomes an adult also active (SBME, 1998). Among the components of fitness, aerobic fitness is important for being viewed as an indicator of overall fitness (WELSMAN et al, 1996), and in children and adolescents be interpreted with caution because it may suffer constant influence over the growth period and maturation. The aerobic fitness depend on three factors, the first is the maximum aerobic power or maximal oxygen uptake (VO2max), the second is the mechanical efficiency, which can be understood as the ability of muscle to perform the physical tasks with less expense energy, and the third the aerobic endurance or aerobic threshold (MESA et al, 2006). With regard to children and adolescents, the study of VO2max, still requires some further order to obtain better explanations on specifics involved in it.

The measurement of skinfold in children and adolescents becomes important because it serves to control the growth and development and also identifies the percentage of body fat.

As in adults, children engaged in physical activities can have an increase in body weight from the increase in muscle mass and not fat tissue. The percentage of fat levels considered optimal for children and adolescents are 10 to 20% for boys. Guys with fat percentage above 25% have a good chance of adulthood, to develop cardiovascular disease (HEYWARD and STOLARCZYK, 2000). Studies with children and adolescents have shown the benefits of physical activity in stimulating the growth and development. These effects are confirmed in different systems: cardiovascular, respiratory, muscular, skeletal, endocrine and cartilage, and the development of socialization and ability to work as a team. (ALVES and LIMA, 2008).

Soccer is considered the most popular sport and physical activity practiced in Brazil and possibly in the world. In addition to its practitioners, the events surrounding the sport attracts a large number of spectators, or in broadcasts of the games on TV, radio and, more recently, internet (DA COSTA, 2005, MATSUDO ARAÚJO and SILVA, 2006). Soccer is a sport that requires of its practitioner several attributes. In a football match held lasting ninety minutes, a player runs about 10 to 12 km, 80% walking and trotting, distance and higher in the first half of the game, depending on the intense decrease in muscle glycogen stores, this makes the aerobic fitness is so important during a match (ARAUJO, 1993, BANGSBO; MOHR; KRUSTRUP, 2006). Studies have concluded that excess body fat is corresponding to the increase in physical inactivity (ANDERSEN apud ARRUDA and LOPES, 2007).

In practice sports in particular football, body composition is important in performance, because excess body fat represents a greater wear in shifts during the game (GUERRA and BARROS, 2004, ALVES et al., 2009). This perspective, the football is still little research, especially with young athletes, for the moment the aspiring athlete is in the early stages of their preparation and training is for high-performance sports or adopting a healthy lifestyle and active (SEABRA; MAIA; GARGANTA, 2001).

Given the above, the present study aimed to identify levels of cardiorespiratory fitness and relative body fat (% BF) in children and adolescents football city of Crato, Ceará.

MATERIALS METHODS

Characterization of the research: The study is characterized as a descriptive-exploratory study with a quantitative field (THOMAS and NELSON, 2002).

Population and sample: The sample was intentional voluntary, composed of 34 male adolescents with average age of 14.14 ± 2.00 years, from the basic categories of a soccer team in the city of Crato, Ce.

Measuring instruments: For the proper realization of this work, has become a tool for collecting the test of walking and running 9 minutes proposed by the battery of measures and testing of somatomotor PROESP-BR (2007), the classification of test scores was presented by the battery itself. For analysis of body composition measures were taken of skinfolds TR and SB. In addressing the level of adiposity and body fat percentage, it was decided by the equation proposed by Boileau et al. (1985) cited by Petroski (2007), the levels of adiposity were classified according to Lohman (1992) adapted by Silva (2002).

Procedures for data collection: First, a word was sent to the institution information explaining the purpose and objective of this research. After the permission of the institution was handed over to the authorities of the Terms of adolescents Consent (IC) according to resolution 196/96 of the National Health Council, 10/10/1996 (BRAZIL, 1996). For effective participation in the study all participants had to answer the readiness for physical activity for young people, were excluded from the study showed that some restriction to physical activity. The tests were applied in the morning and afternoon in a room and properly prepared. Began by taking the anthropometric measurements and were applied after the aptitude tests. In applying the test of 9 minutes followed the recommendations suggested by PROESP-BR (2007). This research was approved by the Ethics Committee of the Universidade Castelo Branco (UCB-RJ), under the protocol 0017/2009 (UCB / VREPGPE / COMEP / PROCIMH) of 12 March 2009.

Treatment and analysis of data: Cook up a database in Microsoft Office Excel 2007 for Windows ®. For data analysis made use of the descriptive statistics of mean (M) standard deviation (SD) minimum (MI) and maximum (MAX) and Correlation Analysis of "r" Pearson to investigate possible relationships between variables. For a better understanding of search results used the strategy "Z" proposed by Celafiscs (MATSUDO; ARAÚJO; OLIVEIRA, 2007). In this analysis the result obtained by the group or individual is made by comparing its results with those of a reference in terms of absolute values, percentage difference and

finally by determining the position relative to a population mean in standard deviation units. We adopted the criteria of condition values suggested by the classification of Z-score (Z Undertanding Strategy) as: Excellent (> 2), Excellent (1 to 1.99), Good (0 to 0.99), Regular (-0.99 to -0.01), low (-1 to -1.99) and Very Poor (<-2).

RESULTS AND DISCUSSION

Table 01 presents the data for descriptive statistics (mean, standard deviation, minimum and maximum values and confidence level) of Age, General Resistance (GR), Z-score (GR) and Z score (% F).

Table 01: Descriptive Statistics of Age, Resistance General Z-score (RG), relative fat (F%) and Z score (% G)

	Age	*General Resistance (m)*	*Escore Z* (GR)	*% F*	*Escore Z* (%F)
Mean	14,14	1783,8	2,06	12,5	-2,96
Standard Mean	2,00	308,6	2,70	3,2	3,79
Minimum	10,01	1159	-1,05	7,9	-13,08
Maximun	17,48	2290	8,03	21,0	2,52
Confiance Level (95,0%)	0,70	107,67	0,94	1,1	1,32

Table 02 presents the results of general resistance scores as proposed by PROESP-Br* and the classification of relative fat (% BF) according to Lohman (1992) adapted by Silva (2002).

Table 02: Classification of Resistance General* and Relative fat (% BF)

General Resistance			Relative fat (F%)		
Classification	Frequency	Valid %	Classification	Frequency	Valid %
Very Weak	2	5,9%	Very Low	0	0,0%
Weak	1	2,9%	Low	6	17,6%
Razoável	4	11,8%	Great	26	76,5%
Good	8	23,5%	Moderately High	2	5,9%
Very Good	19	55,9%	High	0	0,0%
Excellent	0	0,0%	Very High	0	0,0%
	34	100,0%		34	100,0%

Table 03 lists the general classification of the resistance and relative fat under the conditions proposed by the Strategy "Z" in the general resistance 97% of the individuals are in satisfactory conditions have in relative fatness only 18% are in satisfactory values compared with the reference study. Only correlation r = 0.786 between age and overall strength, the other variables showed no significant correlations.

Table 03: Classification of Z-score of Resistance General and Fat Relative

	General Resistance			Relative Fat		
Condition	Z	F(x)	% Percentage	Z	F(x)	% Percentage
Excellent	6,83	7	21%	2,33	4	12%
Very Good	1,44	13	38%	0,00	0	0%
Good	0,52	11	32%	0,32	2	6%
Regular	-0,64	2	6%	-0,31	5	15%
Weak	-1,05	1	3%	-1,47	4	12%
Very Weak	0,00	0	0%	-5,43	19	56%
		34	100%		34	100%

DISCUSSION

To interpret the results and solution to the Z-scores as a benchmark to apply the test of general resistance (9 minutes) results in children and adolescents found in the study by Bergmann (2005), this study was used, as has values within the range age of our study was between 10 and 17 years of age. Since each for 10 years an mean 1228,74 ± 237,56, 11 years 1287,97 ± 251,21; 12 years 1368,60 ± 252,15; 13 years 1442,31 ± 288,04; 14 years 1506,45 ± 283,16; 15 years 1564,55 ± 250,30; 16 years 1576,51 ± 306,72; 17 years 1601,67 ± 265,30.

As for the Z-scores on the relative fat (% BF) used as a benchmark the results presented by the study of Campeiz et al. (2004) with young players, such results were used as the group of our research fits within the characteristics of the study, where values for fat percentage were found mean 10,02 ± 0,84.

The results show that resistance in general our group presented mean 1783,8 ± 308,8 with Z-scores of 2,06, this shows that our youth had scores considered to be excellent for this strength when compared with the reference (BERGMANN, 2005) that examined 6794 children and adolescents gauchos, yet when compared with studies conducted by Vitor et al. (2008) with young athletes in the age between 12 and 16 to the age of our results were down in all age groups. Study Vitor et al. Group A (n = 96) of 12 to 13 years mean 2025,32 ± 184,96, Group B (n = 122) from 14 to 16 years mean 2189,25 ± 243.

In the values of relative fat the group meets with average of 12,5% , the group is within satisfactory levels for the age group that second Lohman apud Petroski (2007) is considered as great between 10 and 20% for boys. These results corroborate other studies presented in the literature with young people the same age and physical activity practitioners, Alves et al. (2009) a study to describe and compare the fitness levels of children's football (C) and juvenile (J) any results of C = 14,0% and J=13,29% and Mascarenhas et al. (2006) which compared the maximum oxygen consumption and body composition in adolescents practicing soccer training at different stages of sexual maturation found the following results: stage 01 (14,23 ± 5,60), stage 2 (10,26 ± 4,57), stage 3 (13,14 ± 5,22), stage 4 (11,43 ± 5,72) and stage 5 (13,85 ± 6,80). But when the Z score compared with the study of Campeiz et al. (2004) the condition of the group was considered very weak.

Our group has produced satisfactory results in general resistance when compared to the classification proposed by PROESP-BR, where 91.2% of the group is between reasonable and very good. According to Malina and Bouchard (2003) and Victor et al. (2008) aerobic capacity expressed as VO2 max increases linearly with boys until around 16 years it occurs in both young athletes and non-athletes, the gains in maximal aerobic power is related to body size, ripeness and gender, and the growth of systems (circulatory, respiratory, muscle) responsible for the release of oxygen. Body composition was classified with 94,1% between excellent and poor when used the criteria proposed by Lohman apud Petroski (2007) and Skinfolds TR and SB.

Body composition in conjunction with the cardiorespiratory capability is one of the components of physical fitness related to performance and health (GALAHUE and OZMUN, 2005, GUEDES and GUEDES, 1997) in adolescents undergoing major changes from the beginning to its end at about 21 years, studies of athletes in the high levels of high body fat are associated

with bad physical fitness and fall of income in most modes (KEOGH, 1999), as well as athletes and not athletes, children, adolescents and adults excessive increase of body fat may lead to problems Cardica, dyslipidemia, increased blood pressure and obesity (GUEDES and GUEDES, 2003).

Dantas (1998) classifies the age of 10 to 12 years with stage of basic training, where young people should emphasize the training focused on the co-ordination, aerobic capacity, muscular endurance and flexibility in a "wide range of sporting activity" and it must be conducted within a school context. Now entre14 and aged 18 years and the stage of specialization, this time the couple should be directed to one area rather than a specific mode.

Gallahue and Ozmun (2005) classify this phase as the motor of specialized stage of application and permanent stage at the moment, the cognitive sophistication allows individuals to take many decisions for learning and participation, is this epoch that will refine and use more complex skills in advanced games, activities and leadership in chosen sports. In the stage of permanent use of the repertoire of movements acquired will be used for the rest of the individual's life, whether in daily life, in the playground or sports practice.

CONCLUSION

Sports activities should provide for the child and adolescent several motor experiences. The soccer practice can improve the physical fitness components related to healthas the motor performance and to improve body composition, increase lean body mass and decrease fat mass. The prescription and participation in activities with soccer can be used as an instrument to insertion in recreational and competitive sports practice or as a possible instrument of health promotion. The results of this study show that young people, within the parameters of health, present satisfactory levels in both the component of general resistance and relative fat when compared to other studies.In athletic parameters the results were not satisfactory. But such results need further clarification and analysis, since the literature is still scarce in studies related to this age group as well in soccer practicing, using the Z score as a criterion of analysis. It is suggested that more studies be conducted with a population of children and adolescents, concerning the applicability of Z score, thus we Will have more parameters of comparison between and cross populations.

REFERENCES

ACSM. **Manual de Pesquisa das Diretrizes do ACSM para os Testes de Esforços e sua Prescrição, Exercício e hipertensão**. Rio de Janeiro: Editora Guanabara Koogan 4ª ed., 2003.

ALVES, D. M. et. al. Aptidão física de futebolistas infantis e juvenis. **Revista Digital - Buenos Aires** - Año 14 - Nº 135 - Agosto de 2009. Disponível em: <http://www.efdeportes.com/efd135/aptidao-fisica-de-futebolistas-infantis-e-juvenis.htm>. Acesso em 27 de outubro de 2009.

ACMS. Opinion statement on physical fitness in children and youth. **Med Sci Sports Exerc** 1988;20:422-3. Disponível em< http://journals.lww.com/acsm

-msse/Citation/1988/08000/American_College_of_Sports_Medicine_Opinion.22.aspx>. Acesso em 27 de outubro de 2009.

ARAÚJO. M. A. S. de. O trabalho do futebol nas divisões inferiores. **Revista de Educação Física**. 1993, 2º sem 121: 55-63. Disponível em<http://www.revistadeeducacaofisica.com.br/artigos/1993/futebol.pdf>. Acesso em 27 de out. de 2009.

ARRUDA, E. L. M.; LOPES, A. S. Gordura corporal, nível de atividade física e hábitos alimentares de adolescentes da região serrana de Santa Catarina, Brasil. **Rev. Bras.Cineantropom. Desempenho Hum.** 2007;9(1):05-1.

BANGSBO, J; MOHR, M; KRUSTRUP, P. Physical and metabolic demands of training and matchplay in the elite football player. **J Sports Sci.** 2006;24(7):665-74.

BERGMANN, G., et al. Aptidão Física relacionada à saúde de crianças e adolescentes do estado do Rio Grande do Sul. **Revista Perfil.** Ano IV, n. 7, p. 12-21, 2005.

CAMPEIZ, J. M. et al. Análise de variáveis aeróbias e antropométricas de futebolistas profissionais, juniores e juvenis. **Conexões,** v.2, n.1, 2004

DA COSTA, L. P. **Atlas do esporte no Brasil.** Rio de Janeiro: Shape, 2005

DANTAS, E. H. M. **Prática da preparação física**. 5 ed. Rio de Janeiro: Shape, 2005.

GALLAHUE, D.L.; OZMUN, J.C. **Compreendendo o desenvolvimento motor: bebês, crianças, adolescentes e adultos.** 3 ed. SP: Ed. Phorte, 2005.

GAYA, A.; SILVA, G. PROESP-BR: **Manual de aplicação de medidas e testes, normas e critérios de avaliação.** Julho 2007.

GLANER, M. F. Importância da aptidão física relacionada à saúde. **Revista Brasileira de Cineantropometria & Desempenho Humano.** Volume 5 – Número 2 – p. 75 - 85 – 2003.

GUEDES, D. P.; GUEDES, J.E.R.P. Controle da Composição do peso corporal: composição corporal atividade física e nutrição.2 ed. Rio de Janeiro: Shape, 2003.

GUEDES, D. P.; GUEDES, J.E.R.P. **Crescimento, composição corporal e desempenho motor de crianças e adolescentes.** São Paulo: CLR Balieiro, 1997.

HEYWARD, V. H.; STOLARCSZYK, L. M. **Avaliação da composição corporal aplicada.** São Paulo: Manole, 2000.

KEOGH, J. The use of physical fitness scores and anthropometric data to predict selection in an elite under 18 Australian rules football team. **Journal of Science and Medicine in Sport.** v.2, n. 2 p. 125-33, 1999.

MALINA, R. M.; BOUCHARD, C. **Atividade Física do Atleta Jovem:** do Crescimento à Maturação. São Paulo: Roca, 2002.

MANTOVANI, T. V. L. et al. Composição corporal e limiar anaeróbio de jogadores de futebol das categorias de base. **Revista Mackenzie de Educação Física e Esporte** – 2008, 7 (1): 25-33

MASCARENHAS, L.P.G. et al. Comportamento do consumo máximo de oxigênio e da composição corporal durante o processo maturacional em adolescentes do sexo masculino participantes de treinamento de futebol. **R. bras. Ci e Mov**. 2006; 14(1): 41-48.

MATSUDO, V. K. R.; ARAÚJO, T. L. de; OLIVEIRA, L. C.. Há ciência na detecção de talentos?. **Medicina Esportiva. Diagn Tratamento.** 2007;12(4):196-9.

MATSUDO, V. K. R.; ARAÚJO, T. L.; SILVA, L. J. da S. Será que o futebol pode promover saúde?. **Medicina Esportiva. Diagn Tratamento**. 2006;11(4):250-4.

MESA, Jose L. et al. The importance of cardiorespiratory fitness for healthy metabolic traits in children and adolescents: the AVENA Study. **J Public Health**. 14: 178–180, 2006.

PETROSKI, Edio Luiz. **Antropometria**: Técnicas e Padronização. 3 ed. Blumenau: Nova Letra, 2007.

SEABRA, A; MAIA, J.A; GARGANTA, R. Crescimento, maturação, aptidão física, força explosiva e habilidades motoras específicas. Estudo em jovens futebolistas e não futebolistas do sexo masculino dos 12 aos 16 anos de idade. **Revista Portuguesa de Ciências do Desporto**, 2001, vol. 1, nº 2 [22–35]

SILVA. R. J.S. **Características de Crescimento, Composição Corporal e Desempenho Físico Relacionado à Saúde em Crianças e Adolescentes de 07 a 14 Anos da Região do Cotinguiba (SE).** Dissertação de Mestrado. Universidade Federal de Santa Catarina, Florianópolis – SC, 2002.

SBME. Posicionamento Oficial Atividade física e saúde na infância e adolescência. **Rev Bras Med Esporte.** Vol. 4, Nº 4 – Jul/Ago, 1998. Disponível em < http://www.medicinadoesporte.org.br/images/pdfs/1998_ativ_fisica_e_saude_inf.pdf>. Acesso em 27 de out. de 2009.

THOMAS, J.R., NELSON, J.K. **Métodos de Pesquisa em Atividade Física.** 3. ed. Porto Alegre: Artmed, 2002.

UNDERTANDING Z STRATEGY. Disponível em <http://www.geocities.com/HotSprings/4109/howmakez.html>. Acesso em 27 de out de 2007

VITOR, Fabrício de Mello et al. Aptidão física de jovens atletas do sexo masculino em relação à idade cronológica e estágio de maturação sexual. **Rev. bras. Educ. Fís. Esp.**, São Paulo, v.22, n.2, p.139-48, abr./jun. 2008

WELSMAN, J.R.et al. Scaling peak VO2 for differences in body size. M**edicine & Science in Sports and Exercise**, Baltimore, v.28, n.2, p.259-265, 1996.

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CARDIORRESPIRATORY FITNESS AND FAT PERCENTAGE OF YOUNG SOCCER PLAYERS OF A TEAM FROM CRATO CITY, CEARÁ-BRAZIL

ABSTRACT

This study aimed to identify levels of cardiorespiratory fitness and relative body fat (BF%) in children and adolescents football city of Crato, Ceará. The study is characterized as a descriptive-exploratory study with a quantitative field. With sample was intentional voluntary, composed of 34 male adolescents with average age of 14,14 ± 2,00 years. To assess the variables general resistance test of walking and running 9 minutes proposed by the battery PROESP-BR and the level of adiposity and body fat percentage, it was decided by the equation proposed by Boileau et al. (1985). People make a database in Microsoft Excel 2007 for Windows®, to analyze the results we resort to descriptive statistics and Z-scores and correlation "r" coefficient. The results show that resistance in general our group presented an mean 1783,8 ± 308,8 with Z-scores of 2.06, this shows that our youth had scores considered as excellent. The values of fat on the group presented an mean 12,5 ± 3,2, but the Z score (Z =-2,96) was considered very weak. The general resistance when compared to the classification proposed by PROESP-BR, showed adequate levels of 91,2% and the fat on the classification of Lohman was classified as excellent and low in 94,1% of the time. We found a correlation between resistance and general age (r = 0,786). The results show that young people, within the parameters of health, meet satisfactory levels in both the component of resistance in general and relative fat when compared to other studies. Parameters in the athletic results were not satisfactory. But these results need further clarification and analysis, since the literature is still scarce in studies related to this age group as well as playing football, using the Z score as a criterion of analysis.

KEYWORDS: cardiorespiratory fitness, body fat, young, football

APTITUDE ET CARDIO-RESPIRATOIRES ET DE LA PERCENTAGE GRAISSE DES JEUNES PRATIQUENT DE FOOTBALL DE LA MUNICIPALITE DE CRATO, CEARA- BRESIL

RÉSUMÉ

Cette étude visait à identifier les niveaux de condition cardiorespiratoire et de la graisse corporelle relative (%G) chez les enfants et les adolescents pratiquent du football de Crato, Ceará. L'étude se caractérise par une étude descriptive et exploratoire avec un domaine quantitatif. Avec échantillon était intentionnel volontaire, composé de 34 adolescents de sexe masculin avec l'âge moyen de 14,14±2,00 ans. Pour évaluer les variables générales essai de résistance de marcher et de courir 9 minutes (PROESP-BR) et le niveau de l'adiposité et pourcentage de graisse corporelle. Les gens font une base de données dans Excel 2007 (Windows®), d'analyser les résultats que nous avons recours à des statistiques descriptives et Z-score et de corrélation "r" coefficient. Les résultats montrent que la résistance en général, notre groupe a présenté (1783,8±308,8) avec Z-score de 2,06, cela montre que nos jeunes ont obtenu des résultats considérés comme excellents. Les valeurs de graisse sur le groupe a présenté une moyenne de 12,5±3,2, mais le score Z (Z=-2,96) était considéré comme très faible. La résistance générale par rapport à la classification proposée par PROESP-BR, ont montré des niveaux adéquats de 91,2% et la graisse sur la classification des Lohman a été classée comme excellente et faible dans 94,1% des cas. Nous avons trouvé une corrélation entre la résistance et de l'âge général (r=0,786). Les résultats montrent que les jeunes, dans les paramètres de la santé, de rencontrer des niveaux satisfaisants à la fois dans la composante de la résistance en général et de la graisse par rapport par rapport à d'autres études. Paramètres dans les résultats sportifs n'étaient pas satisfaisantes. Mais ces résultats doivent encore être clarifiés et d'analyse, puisque la littérature est encore rare dans les études relatives à ce groupe d'âge ainsi que de jouer au football, en utilisant le score Z comme critère d'analyse.

MOTS-CLÉS: fitness cardio-respiratoire, la graisse corporelle, les jeunes, le football

CAPACIDADE CARDIORRESPIRATORIO Y EL PORCENTAJE DE GRASA EN JÓVENES PRACTANTES DE FUTBOL EN EQUIPO DE LA CIUDAD DE CRATO, CEARÁ-BRASIL

RESUMEN

Este estudio tuvo como objetivo identificar los niveles de capacidad cardiorrespiratoria y porcentaje de grasa corporal (%GC) en niños y adolescentes practantes de fútbol de la ciudad de Crato, Ceará. El estudio se caracteriza como un estudio exploratorio-descriptivo con un campo cuantitativo. Con la muestra fue intencional voluntario, integrado por 34 adolescentes varones con edad promedio de 14,14±2,00 años. Para evaluar las variables generales de prueba de resistencia de caminar y correr 9 minutos (PROESP-BR) y el nivel de adiposidad y el porcentaje de grasa corporal. La gente hace una base de datos en Microsoft Excel 2007 para Windows®, para analizar los resultados que recurrir a la estadística descriptiva y puntajes Z y correlación "r" coeficiente. Los resultados muestran que la resistencia en general, nuestro grupo presentó (1783,8±308,8) con puntajes Z de 2,06, esto demuestra que nuestros jóvenes tuvieron puntajes considerados como excelentes. Los valores de la

grasa en el grupo presentó un promedio de 12,5±3,2 SD, pero la puntuación Z (Z=- 2,96) se considera muy débil. La resistencia general cuando se compara con la clasificación propuesta por PROESP-BR, mostró niveles adecuados de 91,2% y la grasa en la clasificación de Lohman fue clasificada como excelente y bajo en el 94,1% de las veces. Se encontró una correlación entre la resistencia y la edad general (r=0,786). Los resultados muestran que los jóvenes, dentro de los parámetros de la salud, cumplir con los niveles satisfactorios en tanto el componente de la resistencia en general y relativo de grasa en comparación con otros estudios. Los parámetros en los resultados deportivos no fueron satisfactorios. Pero esos resultados necesitan una mayor clarificación y análisis, ya que la literatura es aún escasa en estudios relacionados con este grupo de edad, así como jugar al fútbol, mediante la puntuación Z como criterio de análisis.

PALABRAS CLAVE: estado cardiorrespiratorio, grasa corporal, jóvenes, fútbol

APTIDÃO CARDIORRESPIRATÓRIA E PERCENTUAL DE GORDURA DE JOVENS FUTEBOLISTAS DE UMA EQUIPE DA CIDADE DE CRATO, CEARÁ-BRASIL

RESUMO

O presente estudo teve como objetivo identificar os níveis de aptidão cardiorrespiratória e a gordura relativa (%G) de crianças e adolescentes futebolistas da cidade de Crato, Ceará. O estudo caracteriza-se como do tipo descritivo-exploratório, com abordagem quantitativa de campo. Com amostra foi do tipo intencional voluntária, composta por 34 adolescentes do sexo masculino com faixa etária média de 14,14 ± 2,00 anos. Para avaliação das variáveis da resistência geral o teste de andar e correr 9 minutos (bateria PROESP-BR) e para o nível de adiposidade e percentual de gordura, optou-se pela equação proposta por Boileau et al. (1985). Confeccionou-se um banco de dados no Microsoft Excel 2007 for Windows®, para análise dos resultados recorreu-se a estatística descritiva e escore “Z” e correlação de “r” de Pearson. Os resultados demonstram que na resistência geral nosso grupo apresentou média 1783,8±308,8 com escore “Z” de 2,06, isto demonstra que nossos jovens apresentam escores considerados como excelentes. Nos valores de gordura relativa o grupo apresentou uma média 12,5±3,2, porém o escore Z (Z=-2,96) foi considerado como muito fraco. A resistência geral quando comparados com a classificação proposta pelo Proesp-BR, apresentou níveis adequado de 91,2% e a gordura relativa pela classificação de Lohman foi classificada como ótima e baixa em 94,1% dos avaliados. Encontramos correlação entre resistência geral e idade (r = 0,786). Os resultados deste estudo apontam que os jovens, dentro de parâmetros de saúde, encontram-se com valores satisfatórios tanto nos componente da resistência geral como na gordura relativa, quando comparados a outros estudos. Nos parâmetros atléticos os resultados não foram tão satisfatórios. Porém tais resultados necessitam de um maior aprofundamento e análise, pois a literatura ainda é escassa de estudos correspondentes a esta faixa etária bem como em praticantes de futebol, que utilizem o escore Z como critério de análise.

PALAVRAS-CHAVES: aptidão cardiorrespiratória, percentual de gordura, jovens, futebolistas

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