

101 - PROFILE OF PHYSICAL FITNESS OF STUDENTS WHO DO FUTSAL

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INTRODUCTION

Physical quality is all trainable attribute of an organism, or, one capable of adaptation, since sports is the ability to refine or a combination of fundamental movement patterns or motor skills to perform activities of one sport. The development of a sports skill requires you to make changes often need the basic patterns of movement to achieve higher levels of skill (GALLAHUE & Ozmun, 2004).

The sports training of elementary school students is possible by the development to the fact that they present understanding of games and play; Quintao and colleagues (2004) claim that early childhood development fits into a motor, cognitive, affective and social, that occur more slowly or faster, according to the stimuli received.

The development of the athlete will depend on environmental conditions, nutritional, hereditary, and for sports (GALLAHUE & Ozmun, 2004), the young athlete is often influenced by family members, friends and social conditions in which they fit. Rychman and Hamel (1992) state that some of the main reasons why teenagers get sports activities were friends, keep existing friends, or a combination of both.

In this context, indoor soccer is a sport that has shown substantial development in recent years (Santana, 2004). Mutti (1999) believes that soccer is the most practiced sport in Brazil, covering all age groups. Coupled with this fact, Weineck (2003) shows that one should train a child the flexibility through games and gradually, using the methods and content similar to those of adults. Thus the practice of Futsal is an important activity in the sporting aspect, assisting in the development of motor skills of practitioners.

Therefore it was necessary to evaluate the physical characteristics, body mass index (BMI), strength, aerobic capacity, speed and flexibility of male children, with 10, 11 and 12 years of age treated at the Sports Hub Project UFRA (Federal Rural University of Amazonia).

METHODS FEATURES OF THE RESEARCH

The study was conducted at the Sports Hub Project UFRA and characterized by being an assessment of the descriptive type, because the facts or phenomena were observed, recorded, analyzed and correlated without being manipulated, the study showed is also known as field, it corresponds to the direct collection of information on the site where the phenomena occurred.

SAMPLE

The study included 62 boys, aged 10 to 12 years, participants in this project. The exclusion criteria was determined that children who had malaise, muscle pain, changes in column or symptoms of disease or had no more than 15 classes during this study. Survey participants spontaneously agreed to sign an Informed consent. This study was submitted to the Ethics in Research Involving Human Beings of the Hospital of Gaspar Viana, obtaining approval for implementation.

OPERATIONAL

The tests performed were: 40 seconds Race, Standing Long Jump, Mile Test and Test of Flexibility. The assessment of strength was obtained from three horizontal jumps measured in metric scale (FERNANDES, 2005), the speed rating was performed by 40 seconds Race (MATSUDO, 1983, Fernandes (2005), and body mass index (FERNANDES, 2005), to measure the flexibility we used the protocol Goniometria (Dantas, 2001), the following variables: flexion of knee, hip and ankle and extension of the hip joint, aerobic capacity was assessed by walking 1 Mile Test known as Rockport (FERNANDES, 2005) and check your heartbeat (The measures necessary for this study were obtained using the following instruments: Scales with stadiometer Filizola ® properly calibrated and tested, with accuracy 100 g scale of 0 to 150 kg, for determining the weight and height: tape-measure with flexible 2 m long and 0.1 cm precision for measurement of three horizontal jumps; goniometer steel 14-inch, manufactured by Lafayette Instruments, Timer Digital Brand Cassio ®, with variance to store 100 records, to verify the race of 40 miles seo test. Data were analyzed with the help of BioEstat, version 5.0 (Ayres et al., 2007), noting the following statistical indicators: mean, standard deviation, first quartile, third quartile and coefficient of variation.

RESULTS

Results are presented in six times, according to the Tables, 1,2,3,4,5 and 6, with the average values, Medina, standard deviation, minimum and maximum ... Table 1, we observed anthropometric variable: total body mass (TBM) in Kg Body Mass Index (BMI) which expresses the nutritional status. The BMI of children 10 years of age showed that the distance traveled ranged from 11.63 to 28.75, the average achieved was 17.4. For children from 11 BMI ranged from 23.78 to 11:28. The Body Mass Index of children 12 years of age ranged from 14.91 to 29.34. Children of 10 and 11 years showed little difference in BMI, the average increase was 0.05%. The change in BMI between 11 and 12 years was 12.1% and that the largest increase observed in these age groups.

Table 1: Descriptive statistics of body mass index (kg / m²) n = 62 children evaluated.

	10 years (n = 21)	11 years (n = 20)	12 years (n = 21)
Low	11.63	11.28	14.91
First quartile	15.99	15.83	17.32
Median	17.05	16.60	19.21
Arithmetic mean	17.40	17.49	19.62
Third Quartile	18.37	18.57	23.78
High	28.75	23.78	29.34
Standard deviation	3.49	3.18	3.46

Source: the research protocol.

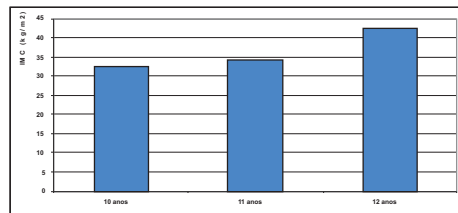


Figure 1: Average of the nutritional status (BMI) of n = 62 children evaluated

The speed rating of children measured by the race 40 seconds, shows that children 10 years of age completed a distance between 175 and 225 m, and the average hit was 197.14 ± 13.5 m; at that age, 40% of children traveled between 188 to 202 m in 40 seconds. Children of 11 years had results ranging from 175 to 225 m, they walked an average of 194.75 ± 14.4 and was observed that 10% of the children reached the class of higher speed (216 for 230 m). The assessment rate for children under 12 years of age ranging from 165 215 m, and the average distance was 190 ± 12.7 m, range lower than children of other age groups and 15% of the children of that age fit into a smaller range speed (160 to 174 m). Children of 11 years had 1.21% less speed than the 10 years of age, whereas younger ma 2:39 traveled more that 11 years. Children aged 12 years was 4.75% slower than the 11 years since traveled, on average, 4.75 mg less than those of 11 years.

Table 2: Test of speed, displacement (m) race in the 40s, (n = 62).

	10 years (n=21)	11 years (n=20)	12 years (n=21)
Low	175.00	175.00	165.00
First quartile	190.00	183.75	180.00
Median	200.00	195.00	195.00
Arithmetic mean	197.14	194.75	190.00
Third Quartile	205.00	201.25	195.00
High	225.00	225.00	215.00
Standard deviation	13.47	14.37	12.75

Source: the research protocol.

Assessing the strength of the lower limbs of children 10 years of age measured using the horizontal jump ranged 1:12 to 1:56 m, the average hit was 134 ± 0.12 me 40% of the children jumped from 1:30 to 1:40 m Children of 11 years had results ranging between 1.13 and 1:58 m, the average achieved was 1.36 ± 11 and it was observed that 75% of the children reached distances between 1:30 to 1:50 m The assessment of children 12 years of age varied between 1.10 and 1.58 showed me that the average (1.37 ± 11 m) was higher than children of other age groups, it is noteworthy that 10% of children in that age were in the range greater distance (1.50 to 1.60 m). The strength increase in the age of 10 and 11 years was 1.49% (two centimeters), however in the range between 11 and 12 years there was a small increase of only 0.7%, resulting in an increase of 1 cm in the jump distance.

Table 3: Test of strength, horizontal jump measured in meters (n = 62).

	10 years (n=21)	11 years (n=20)	12 years (n=21)
Low	1.12	1.13	1.10
First quartile	1.24	1.30	1.30
Median	1.35	1.37	1.36
Arithmetic mean	1.34	1.36	1.37
Third Quartile	1.42	1.45	1.45
High	1.56	1.58	1.58
Standard deviation	0.12	0.11	0.11

Source: the research protocol.

Assessment of aerobic endurance of children aged 10, achieved by the 1 mile walk showed that the time to complete the course varied 13:45 to 15:20 (minutes) and averaged 14:56 minutes, 85% of children completed the course in time than to 14.5 minutes and only 5% completed in less than 13.8 minutes. Children of 11 years had the time ranging from 14:45 to 15.5 minutes and the average was 14.65, 70% of the children completed the race between 14.5 and 14.8 minutes which is always a tendency of the sample in this age group.

The assessment of children 12 years of age ranged from 14:32 to 15:15 minutes, the average (14.74 minutes) was higher than children of other age groups and 85% of children in this age completed the course in time more than 14.5 minutes. Differences in time to walk the distance of a mile left in the house of seconds, and observed a reduction of 1 "of 10 to 11 years old and up 2" from 11 to 12 years.

Flexion of the hip among children in the age of 10, 11 and 12 years, was evaluated from the average of the bending to the right and left. We observed that children aged 12 years reached 74.8 degrees greater flexion (mean right and left), followed by children of 10 years was 74 degrees, for the last 11 year olds achieved flexion of 73.5 degrees.

The extension of the hip among children aged 10, 11 and 12 years, was evaluated from the average between left and right sides. We observed that children aged 10 years reached the extent of 22.8 degrees, followed by children 11 years reaching 22.5 degrees, and finally the children of 12 years have had flexion of 22.3 degrees, from these records it is observed that children of 10 stood out with a small margin above.

Table 6: Extension of hip (n = 62) children with 10,11 and 12 years of age .

	10 years (n=21)	11 years (n=20)	12 years (n=21)	General (n=62)
Hip Extension				
Right				
Median	23.0	22.0	23.0	22.5
1Q	20.5	20.0	19.0	20.0
3Q	24.8	24.0	26.0	24.8
Average	23.6	21.8	22.0	22.6
Standard	6.4	4.1	4.9	5.3
Left				
Median	22.0	22.5	21.5	22.0
1Q	20.5	21.0	19.5	20.0
3Q	23.0	24.0	23.3	24.0
Average	23.0	22.4	21.3	22.4
Standard	5.2	3.3	2.8	4.6
Average (Right-Left)	22.8	22.5	22.3	22.8
1Q	20.5	19.0	19.3	19.3
3Q	23.5	24.1	24.6	24.3
Average	23.3	22.1	21.6	22.5
Standard	5.7	3.2	3.8	4.5

Source: Research Protocol.

DISCUSSION

The development of motor performance in childhood and adolescence is strongly associated with the processes of growth and maturation. Because of this interdependent relationship, the assessment of motor performance should be considered the aspects of physical growth and the chronological age and biological (Bohm, 1999), which might encourage earlier in the process of biological development, and may discourage other late with more opportunities to become great athletes in the future. In the United States, Paxton et al (2004), Yates et al (2004) developed studies involving the rates of BMI and aspects related to eating foods, physical activity, and features over weight and obesity in adolescence. In Brazil, Coelho et al (2002) studied the influence of sexual maturation on body mass index in adolescents of low socioeconomic status in Rio de Janeiro, concluding that whenever possible we should use the assessment of sexual maturation associated with BMI for a more reliable classification of the state of malnutrition or obesity among adolescents. Vitalle et al (2003), also surveying low-income population studied the body mass index, pubertal development and their relationship with menarche, noting that BMI was significantly higher in adolescents who have already presented menarche, repeating the literature.

Lazolli and colleagues (1998) consider that advancing age may be accompanied by a decline in physical activity, hence a lower energy expenditure and may be influenced by several factors, including: social behavior and student commitments.

CONCLUSION

The central focus of this research was to analyze the physical qualities in children 10 to 12 years of age who live in the socioeconomic characteristics of the outskirts of Bethlehem, PA, assisted by the project's sports UFRA Pole. The first question we raise concerns the contrast shown by the increase in weight and height which was not accompanied by an increase in the same amount of speed, flexibility and aerobic capacity. It remains questionable whether the increase in weight and height is suitable for the track Atari focused in this study. However, although we were unable to draw parallels in this context, this study is a pioneer launches as an initial profile for future analysis can be made from the observations made in this research.

WORD-KEY: Physical Aptdation, Children, Futsal.

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**PROFILE OF PHYSICAL FITNESS OF STUDENTS WHO DO FUTSAL
 ABSTRACT**

The aim of this study was to evaluate the profile of physical fitness related to the performance of children aged 10 to 12 years, participants of the Sports Center Project UFRA in the city of Belém-PA. The sample comprised 62 boys, all participants of the project. For this analysis, were the following: body mass index (BMI), speed and flexibility. The tests were performed: 40 Seconds of Running, Jumping Horizontal, Test and Test of Flexibility mile. Evaluation of force was obtained from three horizontal jumps measured in metric scale (FERNANDES, 2005), the evaluation was carried out by the speed of 40 seconds Race (MATSUDO, 1983 apud FERNANDES (2005) and Body Mass Index (FERNANDES, 2005) to measure the flexibility of the protocol was used goniometry (DANTAS, 2001). The tests showed that the age of the children was a determinant for the outcome of the study, since the results showed that the average speed of children with 10 years was higher than the other, while in relation to flexibility, all tests showed that children of 12 years had greater resourcefulness, children of 11 years results in both tests of speed, flexibility and BMI, which include the band obtained by children of 10 and 12 years participating in the study.

WOLD-KEY: phisical apdation, children, futsal

**PROFIL DE LA CONDITION PHYSIQUE DES ÉTUDIANTS QUI NE FUTSAL
 RESUMÉ**

L'objectif de cette étude était d'évaluer le profil de l'aptitude physique liée à la performance des enfants âgés de 10 à 12 ans, les participants du projet du Centre sportif UFRA dans la ville de Belém-PA. L'échantillon comprend 62 garçons, tous les participants du projet. Pour cette analyse, ont été les suivants: l'indice de masse corporelle (IMC), la vitesse et la flexibilité. Les tests ont été effectués: 40 secondes de course, le saut horizontal, de test et d'essai de flexibilité mile. Evaluation de la force a été obtenu à partir de trois sauts horizontaux mesurée en unités métriques échelle (FERNANDES, 2005), l'évaluation a été effectuée par la vitesse de 40 secondes de course (MATSUDO, 1983, apud FERNANDES (2005) et l'indice de masse corporelle (FERNANDES, 2005) afin de mesurer la flexibilité du protocole a été utilisé goniometry (DANTAS, 2001). Les tests ont montré que

l'âge des enfants a été un facteur déterminant pour l'issue de l'étude, car les résultats ont montré que la vitesse moyenne des enfants de 10 ans a été plus élevée que les autres, alors que par rapport à la flexibilité, à tous les tests ont montré que les enfants de 12 ans a plus de ressources, les enfants de 11 ans dans les résultats de deux tests de rapidité, de flexibilité et de l'IMC, qui comprennent les bande obtenus par les enfants de 10 et 12 ans participant à l'étude.

MOT-CLÉ: l'aptitude physique, enfants, futsal

PERFIL DE LA APTITUD FÍSICA DE LOS ESTUDIANTES QUE HACEN FÚTBOL SALA

RESUMEN

El objetivo de este estudio fue evaluar el perfil de la aptitud física relacionados con el desempeño de los niños de edades entre 10 y 12 años, participantes en el Centro Deportivo de UFRA proyecto en la ciudad de Belém-PA. La muestra comprende 62 niños, todos los participantes del proyecto. Para este análisis, fueron los siguientes: índice de masa corporal (IMC), velocidad y flexibilidad. Las pruebas se realizaron: 40 Segundos de correr, saltar horizontal, ensayos y prueba de flexibilidad milla. Evaluación de la fuerza se ha obtenido a partir de tres saltos horizontales medidos en escala métrica (FERNANDES, 2005), la evaluación fue llevada a cabo por la velocidad de 40 segundos Raza (MATSUDO, 1983 apud FERNANDES (2005) y el Índice de Masa Corporal (FERNANDES, 2005) para medir la flexibilidad del protocolo fue utilizado goniometry (Dantas, 2001). Las pruebas mostraron que la edad de los niños fue un factor determinante para el resultado del estudio, ya que los resultados mostraron que la velocidad media de los niños con 10 años fue superior a los demás, mientras que en relación a la flexibilidad, todas las pruebas mostraron que los niños de 12 años había más recursos, los niños de 11 años los resultados en ambas pruebas de velocidad, la flexibilidad y el índice de masa corporal, que incluyen la banda obtenidos por los niños de 10 y 12 años participan en el estudio.

PALABRA-CLAVE: aptitud física, niños, fútbol sala

PERFIL DE APTIDÃO FÍSICA DOS ALUNOS QUE PRATICAM FUTSAL

RESUMO

O objetivo deste estudo foi avaliar o perfil de aptidão física relacionada ao desempenho de crianças na faixa etária de 10 a 12 anos, participantes do Projeto Pólo Esportivo da UFRA, na cidade de Belém-PA. A amostra foi composta por 62 meninos, todos participantes do referido projeto. Para essa análise, foram observados os seguintes elementos: índice de massa corporal (IMC), velocidade e flexibilidade. Os testes realizados foram: Corrida de 40 Segundos, Salto Horizontal, Teste de Milha e Teste de Flexibilidade. A avaliação da força foi obtida a partir de três saltos horizontais medidos em escala métrica (FERNANDES, 2005); a avaliação da velocidade foi realizada através da Corrida de 40 segundos (MATSUDO, 1983 apud FERNANDES (2005); e Índice de Massa Corporal (FERNANDES, 2005); para mensurar a flexibilidade foi utilizado o Protocolo de Goniometria (DANTAS, 2001). Os testes mostraram que a idade das crianças foi um determinante quanto aos resultados do estudo, já que os resultados demonstraram que a média de velocidade das crianças com 10 anos foi superior a das demais; já em relação à flexibilidade, todos os testes demonstraram que as crianças de 12 anos apresentaram maior desenvoltura; as crianças de 11 anos obtiveram resultados, tanto nos testes de velocidade, IMC e flexibilidade, que compreendem a faixa obtida por crianças de 10 e 12 anos participantes do estudo.

PALAVRA – CHAVE: aptidão física, crianças, futsal

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