

**58 - GROWTH AND MOTOR PERFORMANCE IN SCHOOLCHILDREN OF MANAUS**DAURIMAR PINHEIRO LEÃO<sup>1</sup>;IVAN DE JESUS FERREIRA<sup>2</sup>;WAGNER JORGE RIBEIRO DOMINGUES<sup>3</sup><sup>1,2,3</sup>UNIVERSIDADE FEDERAL DO AMAZONAS-UFAM

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**INTRODUCTION**

The specific literature, that it looks for to build theoretical referenciais on the levels of the children's health and adolescents of the different ethnic, it uses the tests of motor acting and measured anthropometrics to evaluate the physical fitness, and like this, to develop public politics for physical education and the sport with addressed programs the this population.

To worry with the promotion of the health of the populations, pointing out the regular practice of the exercise, it started to be an essential factor of prevention and control the a group of degenerative diseases. Therefore, in relation to the children and adolescents he/she becomes unequivocal the need to measure the growth, the corporal composition and to test the physical fitness, because, they are also important indicators as for the levels and to the conditions of health of the one of the people.

For Barbanti (2003); Marcondes (1970), the growth corresponds to the "somatory of phenomena cellular, biochemical, biophysical and morphogenetic, whose integration is made according to a plan predetermined by the genetic inheritance and modified by the atmosphere". Already the corporal composition is defined as a process of gradual changes of the dispositions physical, mental and emotional caused by influences of a group of phenomena that acts of driven form and ordinate on all of the human beings, allowing to develop him of a simple level for a more compound from the conception to the death (BARBANTI, 2003; GUEDES and GUEDES, 2002).

The physical fitness is focused in several population investigations of physical education and sciences of the sport defined with several meanings (GUEDES & BARBANTI, 1995; GUEDES & GUEDES, 1995; LION, 2005; FERREIRA & LION, 2009). However, he/she comes characterized by a group of attributes, but under the slope related to the capacity of sporting acting and related with the health, (BARBANTI, 1990, 2003; BARBANTI & GUISELINI, 1993; FOX & BIDDLE, 1988, 1999; GUEDES and GUEDES, 1995; MILK, 2000). Like this, the objective of this study it was describe the growth patterns and the levels of the children's from Manaus physical fitness.

**METHODOLOGY**

A random sample composed of 950 children of both sexes was selected, being 588 boys and 362 girls from 7 to 12 years that it corresponded to 30% of representativeness of the population for conglomerate of the Municipal Centers of Sport and Leisure distributed in the six areas of the city of Manaus, according to the TABLE 1.

TABLE 1 - Total of the boys sample and girls measured and tested from seven to 12 years, of both sexes, of the Municipal Centers of Sport and Leisure of Manaus - AM.

AGE	BOYS	GIRLS	TOTAL
7	61	67	128
8	67	62	129
9	88	74	162
10	96	45	141
11	128	58	186
12	148	56	204
TOTAL	588	362	950

The collection of data happened in the dependences of the Municipal Centers in the morning and the afternoon, involving the variables anthropometrics of corporal weight, stature and skinfolds in the areas tricipital and subescapular. The physical fitness variables related to the health was the test of sit-and-reach, the modified sit-up and the run/walk of 9 minutes.

The corporal weight was measured in Kg using a scale digital electronics with approach of 100g, in agreement with suggested him/it by Gordon, Chumlea and Roche (1988). Para to measure the stature a wood estadiometro it was used (board), graduate with intervals of 1mm in agreement with suggested him by Gordon, Chumlea and Roche (1988). The referential used for the determination of the skinfolds in the areas tricipital and subescapular follow the technique proposed by Harrison et alii (1988). So much, a compass of skinfolds of the mark JOHN BULL was used with the registrations made with a precision of 0,2 mm. For verify the physical fitness related to the health, the international standardization was used suggested by the manual of AAHPERD, (1980).

The results of the measures anthropometrics and of the motor tests they were submitted to the statistical analysis through descriptive statistics techniques for calculation of the averages, deviations pattern, variation width, through the computation program SPSS version 14.0. The differences among the sexes will be analyzed through the test "t" of Student for comparison.

**RESULT AND DISCUSSION**

The comparison of the information with the scores of the medium values and of the test t of produced Student of the variables of corporal weight, stature, skinfolds tricipital and subescapular between the boys and girls, display growing values in all the variables and age groups of the present study the table 2 accordingly. In the variable of corporal weight for the eight nine year-old ages the girls presented larger values of corporal mass that the boys with differences significant statisticament, but in the eleven year-old age the differences significant statisticament were registered in the boys' favor. However, in the stature the eleven year-old girls presented larger values than the boys with differences significant statisticament, this superiority portrays the girls' pull more precocious pubertario in relation to the boys.

TABLE 2 - Comparison of the averages and value of the test "t" of Student of the variables of corporal weight, stature and skinfolds tricipital, subescapular of both sexes from 07 to 12 years of the Municipal Centers of Sport and Leisure of Manaus - AM.

Sex	Age	Body weight		E stature		Tricipital		Subscapular	
		$\bar{X}$	t	$\bar{X}$	t	$\bar{X}$	t	$\bar{X}$	t
Male	7	25,8	-1,02	124,2	-1,27	9,3	2,38*	6,5	0,45
Female		24,7		126,0		10,7		6,7	
Male	8	26,5	2,14*	126,9	1,12	8,9	4,67*	6,4	4,49*
Female		28,5		128,1		11,9		8,9	
Male	9	29,3	2,01*	133,5	-1,17	8,8	6,56*	6,3	6,17*
Female		31,2		132,3		12,6		9,8	
Male	10	33,5	-0,44	137,8	-0,70	9,7	1,64	7,6	1,13
Female		32,9		137,0		11,6		8,6	
Male	11	38,6	4,10*	140,7	2,80*	8,8	6,27*	6,8	6,32*
Female		33,5		144,0		12,2		10,6	
Male	12	39,7	0,41	146,9	1,38	10,1	1,88	8,2	0,49
Female		40,2		149,3		12,4		8,6	

To the we analyze and we compare the data of the scores with the values of the subcutaneous fabric, we can observe that the girls presented larger amount of fat than the boys in the ages of seven, eight, nine and eleven years in the area tricipital and in the ages of eight, nine and eleven years in the area subscapular with differences significant statisticament.

The table 3 presents the medium values and of comparison through the test "t" of Student of the aptitude tests physics related to the health with the variables of sit-and-reach, modified sit-up accomplished in the time of 60 seconds and run/walk in the time of 9 minutes between boys and girls. It is observed that in the variable of sit-and-reach, the girls present larger scores than the boys along the ages with differences significant statisticament to the seven, ten and twelve years, probably because the flexibility of the muscles subsequent of the girls' thigh is larger than the one of the boys.

Though the extracted result of the test of sit-up force/ resistance suggests that the medium values of the boys' scores are larger than the one of the girls in all of the age groups with differences significant statisticament in the ages of seven, eight, nine, ten and eleven years.

To the we analyze the data of the variable of run/walk of 9 minutes between boys and girls, it is noticed that the medium values reveal larger score in favor of the boys in all of the age groups with differences significant statisticament in the ages of eight, eleven and twelve years.

TABLE 3 - Comparison of the averages and value of the test "t" of Student of the variables: to sit-and-reach, modified sit-up and run/walk of 9 minutes of both sexes from 07 to 12 years of the Municipal Centers of Sport and Leisure of Manaus –AM.

Sex	Age	sit-and-reach		modified sit-up		run/walk of 9 minute	
		$\bar{X}$	t	$\bar{X}$	T	$\bar{X}$	t
Male	7	20,7	2,76*	18	-4,30*	1.316	-1,41
Female		23,3		12		1.260	
Male	8	23,6	-0,55	21	-5,90*	1.361	-3,08*
Female		23,1		12		1.236	
Male	9	22,5	1,96	21	-5,16*	1.358	-1,93
Female		24,6		14		1.284	
Male	10	22,3	2,51*	23	-4,66*	1.390	-1,62
Female		25,5		16		1.308	
Male	11	23,8	1,78	26	-3,61*	1.494	-3,69*
Female		26,6		21		1.331	
Male	12	23,3	2,17*	24	-1,79	1.584	-3,77*
Female		25,6		22		1.412	

P<0,05\*

## CONCLUSIONS

The extracted data of this study indicate a growing behavior of the medium values of stature, corporal weight and body Composition with the age in both sexes, suggesting be the tall girls and weighed temporarily and they presented larger accumulation of corporal fat that the boys, mainly starting from the eleven years where the occurrence of the percentile of subcutaneous fat becomes larger, due to the coming more precocious maturational in the girls, being these indexes considered similar to the that have been found in reference studies.

Regarding the aptitude tests physics data related to the health is observed that in relation to flexibility the girls presented a growing behavior of the medium values with indexes of larger acting than the boys.

In relation to the indicators of sit-up force/resistance and resistance cardio respiratory, the extracted data of this study indicate a growing behavior with little variation of the medium values in these two variables in both sexes, but suggesting the boys' better acting when compared with the girls. These information points that the boys are probably moved more than the girls, characterizing that the girls demonstrate little motivation the practice of regular physical activities.

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## GROWTH AND MOTOR PERFORMANCE IN SCHOOLCHILDREN OF MANAUS

### ABSTRACT

The objective of the study was to describe the growth patterns and the levels of physical fitness related to the children's from Manaus health, through a traverse approach using a battery of tests of motor acting and of the measures anthropometrics. It was studied a sample of 950 subject of both sexes with age among seven to 12 years, being 588 boys and 362 girls, selected randomly in the population of the Municipal Centers of Sport and Leisure of the municipal district of Manaus-AM. The results of the variables anthropometrics showed that the girls are higher, heavier and they presented larger accumulation of corporal fat than the boys. Regarding the aptitude tests physics data related to the health is observed that in relation to flexibility the girls presented indexes of larger acting than the boys. In relationship the variables of modified sit-up and run/walk of 9 minutes, the data indicate the boys' better acting when compared with the girls. These information points that the boys are probably moved more than the girls, characterizing that the girls demonstrate little motivation the practice of regular physical activities.

**KEY WORDS:** Growth, body composition, Physical fitness.

## AUGMENTATION ET PERFORMANCE DU MOTEUR DANS ÉCOLIERS DE MANAUS

### RÉSUMÉ

L'objectif de l'étude était décrire l'augmentation modèle et les niveaux de mise en forme ont raconté aux enfants de santé de Manaus, à travers une approche de la traverse qui utilise une pile d'épreuves de moteur qui agit et de l'anthropometrics des mesures. Il a été étudié un échantillon de 950 sujet des deux sexes avec âge parmi sept à 12 années, être 588 garçons et 362 filles, le randomly sélectionné dans la population des Centres Municipaux de Sport et Loisir du district municipal de Manaus Est. Les résultats de l'anthropometrics des variables ont montré que les filles sont plus hautes, plus lourdes et ils ont présenté plus grande accumulation de graisse du caporal qui les garçons. Concernant les données de la physique des tests d'aptitude en rapport avec la santé est observé que par rapport à flexibilité les filles ont présenté des index de plus grand suppléant que les garçons. Dans rapport les variables d'exercice abdominal modifié et run/walk de 9 minutes, les données indiquent le meilleur suppléant des garçons quand a comparé avec les filles. Ceux-ci que l'information pointe que les garçons sont déplacés probablement plus des filles, en caractérisant que les filles démontrent petite motivation l'entraînement d'activités physiques régulières.

**MOTS-CLES:** Augmentation, composition du corps, mise en forme.

## EL CRECIMIENTO Y ACTUACIÓN DEL MOTOR EN SCHOOLCHILDREN DE MANAUS

### RESUMEN

El objetivo del estudio era describir los modelos de crecimiento y los niveles de salud relacionados a los niños de la salud de Manaus, a través de un acercamiento atravesado que usa una batería de pruebas de acción del motor y del antropométricas de las medidas. Se estudió una muestra de 950 asunto de ambos sexos con la edad entre siete a 12 años, mientras siendo 588 muchachos y 362 muchachas, seleccionado al azar en la población de los Centros Municipales de Deporte y Ocio del distrito municipal de Manaus-AM. Los resultados del antropométricas de las variables mostraron que las muchachas son más altas, más pesadas y ellos presentaron acumulación más grande de grasa corpórea que los muchachos. Con respecto a la aptitud prueba datos de las físicas relacionado a la salud se observa que respecto a la flexibilidad las muchachas presentaron índices de acción más grande que los muchachos. En la relación las variables de abdominal modificá, sentar y alcanzar y la carrera/el paseo de 9 minutos, los datos indican la acción buena de los muchachos cuando comparó con las muchachas. Éstos que la información apunta que los muchachos probablemente se mueven más de las muchachas, mientras caracterizando que las muchachas demuestran la motivación pequeña la práctica de actividades físicas regulares.

**LAS PALABRAS CLAVE:** El crecimiento, la composición del cuerpo, la salud.

## CRESCIMENTO E DESEMPENHO MOTOR DE CRIANÇAS DE MANAUS

### RESUMO

O objetivo do estudo foi descrever os padrões de crescimento e os níveis de aptidão física relacionada à saúde das crianças de Manaus, através de uma abordagem transversal utilizando uma bateria de testes de desempenho motor e das medidas antropométricas. Foi estudada uma amostra de 950 sujeitos de ambos os sexos com idade entre sete a 12 anos, sendo 588 meninos e 362 meninas, selecionados aleatoriamente na população dos Centros Municipais de Esporte e Lazer do município de Manaus-AM. Os resultados das variáveis antropométricas mostraram que as meninas são mais altas, mais pesadas e apresentaram maior acúmulo de gordura corporal que os meninos. Com relação aos dados dos testes de aptidão física relacionado à saúde observa-se que em relação a flexibilidade as meninas apresentaram índices de desempenho maior que os meninos. Em relação as variáveis de abdominal modificado e corrida/caminhada de 9 minutos, os dados indicam melhor desempenho dos meninos quando comparados com as meninas. Estas informações apontam que os meninos provavelmente se movimentam mais que as meninas, caracterizando que as meninas demonstram pouca motivação a prática de atividades físicas regulares.

**PALAVRAS CHAVE:** Crescimento, Composição corporal, Aptidão Física.

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