135 - EVALUATION OF THE BODY COMPOSITION, BMI, EXPLOSIVE FORCE, FLEXIBILITY, HEART BREATHING CONDITIONS AND SPEED IN CHILDREN OF PUBLIC AND PRIVATE SCHOOLS FROM JACAREZINHO CITY

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1. Introduction: In the present work, will be boarded the movement valences and the Body composition in order to correlate them with the standards of normality and other studies of the sort, as well as identifying these relations between children in pertaining to school age, correlating collected data in particular and public schools, with distinct familiar income.

It is known that many health problems are related with habits and life style since the first years until the adult phase, the Body Weight and function of the energy and nutrients balance. The Body composition, by deduction can be determined by the life style, nutricional habits and physical activity. For WEINECK (2003), the health cannot be understood as a steady property for all the life, the same one is subjected to fast changes, being sufficiently influenced for the actions of the individual. According to NIEMANN (1999), the health is defined as a state of complete physical, mental, social well-being and spiritual, and not only the absence of illnesses or diseases. And the physical aptitude is a condition in which the individual posseses energy and vitality enough to carry through the daily tasks and to participate of recreation activities without fatigue. According to MARINS & GIANNICHI (2003), the motor capacities are distributed in Physical Condition, formed by flexibility, force, heart breathing condition, structure, corporal condition and Motor performance, that are: power, balance, speed, rhythm and speed of reaction. As BARBANTI (1990), the components of the physical aptitude can be defined, be measured and developed separated one of the others, where the exercises can be specific for the development of each one of the components of the physical aptitude, and the same ones had been related in two groups, the first one relates to the sporting abilities and the second is related to the health. Having this in sight we look for specific exercises for each physical quality. **1.1 Objectives:** This work has as objective to correlate the data of Body mass index, stature, weight and percentage of fat with the standards of normality and the relations between the evaluated pupils of public and particular institutions, still has as objective the physical evaluation to be able to diagnose the level of aptitude of the individuals in relation to the average suggested for other works of the sort and to determine the relation between the physical conditioning of individuals of 9 and 10 years old in the city of Jacarezinho - PR, Brazil.

2. Literature review

2.1 Aerobic resistance/Aerobic Power/Heart breathing resistance: As MATSUDO (2005) we can define the aerobic power as the capacity that one individual has to carry through an activity with duration over four minutes. The heart breathing resistance is the capacity of all the body to support the drawn out exercise, WILMORE (1999). GUEDES (1997) classifies the resistance as being general or local this is going to depend of the amount of participant muscles in the activity; about the energy attainment, the resistance can be aerobic and anaerobic ; about the duration time, resistance of short, medium and long duration. The heart breathing component directly is associated with the levels of health of an individual. In low levels, this component has been related to some causes, specifically on to the heart arterial sytem illnesses. We also know that the opposite, that is, raised levels reached through regular physical activities, are connected to diverse benefits to the health, FILHO (2003). **2.2 Speed:** it is the capacity to carry through a movement in the lesser space of time, is connected to the motor performance and sport modalities MARINS & GIANNICHI (2003). The speed is a variable of the general physical aptitude of great importance, to be a basic component of many sport modalities. Thus, we consider of utmost importance its evaluation as not only indicating of general physical aptitude, but also as possibility to detect talents in speed, to observe training effect or still to analyze if the pertaining to school is with results that its age corresponds, MATSUDO (2005). **2.3 Explosive force or Power:** As GUEDES (1997) the motor capacity power is the accomplishment of a maximum effort in the lesser space of possible time, thus representing the relation the index of force between presented for an individual and the speed with that the same one can carry through the movement. Many authors define force as the capacity to exert tension against a resistance that occurs by means of different muscular actions (BARBANTI, 1979, apud MOLINARI, 2000). The explosive force or power, in turn, can be explained by the accomplishment of a maximum effort in the lesser space of possible time GUEDES (1997). As NESPEIRA (2002) Explosive Muscular Power is the neuromuscular capacity to surpass, with high speed of execution and or one high frequency of execution, resistências sufficiently raised resistances. **2.4 Flexibility:** Flexibility is appraised as the maximum passive physiological amplitude in a articulated movement ARAUJO (1987).As MATSUDO (2005) flexibility is the Level of possible movement of a joint or set of joints. **2.5 Body mass index:** There are evidences of that low values of Body mass index are related to obstructive pulmonary illnesses, pulmonary cancer and tuberculosis and high values with heart arterial sytem illnesses, arterial hypertension, diabetes mellitus and others, FERNANDES SON (1999). Overweight as MCARDLE (1985) are the extreme increase of the amount of corporal fat, or the excess of storage of energy in the fat tissue "and according to ACSM, 1993," is the percentage of corporal fat that increases the risk of illnesses ". **2.6 Body composition:** For NIEMANN (1999), the Body composition mentions the amount of corporal fat and thin tissue , being expressed in fat percentage. According to GHORAYED & BARROS (1999), the Body composition mentions the amount and ratio of the diverse constituents of the human body, which are related to the health, illness and quality of life of the individual. **2.6.1 Cutaneous Folds:** According to MATSUDO (2005): cutaneous fold, or also prega cutaneous, is a measure that aims to evaluate, indirectly, the amount of fat contained in subcutaneous cellular tissue and, from there, to be able to esteem the ratio of fat in relation to the Body Weight of the individual. **2.7 Located muscular resistance:** For NIEMANN (1999), muscle skeleton aptitude relates to the muscular resistance, force and flexibility being that the same one is specific for each joint of the body. Force Resistance according to BARBANTI (1979), is the muscular capacity of resistance of the muscles or groups against the fatigue with repeated muscular contractions. For ROCHA (2002) the muscular force is of the physical valences, most important of all, therefore it is indispensable element in the accomplishment of any type of movement, of most elementary to more complex. Morehouse apud BARBANTI (1979), says that motor force is the capacity of the neuromuscular system defeat resistances, as example, the weight of the proper body, one weight, an object, etc. As NIEMANN (1999), the muscular force is the maximum force of an effort that a person can produce against a resistance, and muscular resistance is the capacity of the muscles to repeat an effort to the maximum. **2.8 Stature or total Height:** Following MATSUDO (2005) the total height in the distance between two plans that respectively touch the plant of the feet and the vertex (higher point of the head). **2.9 Body Weight:** For MATSUDO (2005) Body Weight is the resultant of the system of forces exerted for the gravity on the mass of the body. However, the weight in absolute value can be admitted as being

equal to the mass.

3. Material and methods

3.1 Planning of the Research: This research was carried through with character of correlation of data in a transversal study. **3.2 Sample:** A sample of 103 children with age between 9 and 10 years old, average of the 9,18 for both schools was used, 53 of public schools and 50 of particular schools of the city of Jacarezinho, Paraná, being the total of children 54 boys and 49 girls. **3.3 Instruments and Procedures:** Total corporal mass and stature had been measured using scale and altimeter of the Filizola type, with precision of the scale of 0,1 cm and 50 g respectively, for the based calculation of Body mass index in the table suggested for the WHO (1997); was also measured the percentage of corporal fat with scientific caliper CESCORF for the protocol of cutaneous folds of BOILEAU(1985). To evaluate the explosive force of the inferior members and flexibility, they had been used respectively, the Horizontal Jump JOHNSON and NELSON (1979), and the Test seat and reach (Bank of WELLS)(ibidem), with initial counting of 0 cm and counting 24 centimeters from the base of the foot. Both, as well as weight height and Body composition, had been carried through in the sports court of the schools. The method of heart breathing evaluation was the 9-minutes test and for speed the 50-race.. The tests had been carried through in the athletics track of the Faculdade Estadual de Educação Física e Fisioterapia de Jacarezinho. **3.4 Treatment of the data and Statistics:** The data had been collected and with them six Microsoft EXCELL (2003) schedules had been created, one with all the constituent, another one with the constituent of the feminine sex and another one of the masculine sex. This procedure was used for both the schools, private and public, in these EXCELL schedules had been calculated the addition of the collected data, average, variance and shunting line standard for each item supramentioned in the revision of the literature item of this workmanship. All the procedure was carried through on the supervision of a mathematician duly qualified.

4. Results and quarrel

4.1 9-minutes Test (Aerobic resistance): In accordance with the measured data was found the average value of 1208,69 meters of distance covered in 9 minutes for the children of public schools. In the private schools the found average value was of 1037,35 meters. In the public schools, between the boys the average was of 1.214 meters, inside of the accepted value for children with age of ten years that would be at very least from 1,200 to the 1,600 meters, according to the CENTRO DE EXCELÊNCIA ESPORTIVO da UFGRS (2001). Once the girls had covered inside 1,203.6 meters in average, distance fit in the standard, that to girls has the value from 1.100 to the 1,550 meters. In the particular schools the average of the boys is 1,054.34 meters, value that is below of the expected, once between the girls the average was of 1013,6 meters, another value also below of the suggested one for the age (ibidem).

9-minute test in meters			
Public school girls	Private school girls	Public school boys	Private school boys
1203,59 ± 309,79	1013,74 ± 166,00	1214,00 ± 182,57	1054,44 ± 188,40

It is verified through the presented data that the values had been lesser, or next to the inferior limit of the considered for the table suggested for the CENTRO DE EXCELÊNCIA ESPORTIVO da UFGRS (2001) in the particular schools and in the average of the public schools. THOMAS ET ALL (1988) apud GUEDES (1993) searching to evaluate the relation of the results gotten in this test with biological and ambient factors. These authors had evidenced that the only biological variable, throughout all infancy and adolescence, that is related with the performance in the race was the amount of corporal fat, that is, the children and adolescents with bigger amounts of fat covered long distances more slowly. **4.2 Test of Speed:** for the matter of the speed, in the public schools was found 12 seconds for 50 meters average. In the particular schools the average of speed for 50 meters was 12,85 seconds. The public schools boys had taken 11,4 seconds in average and the girls 12,6 seconds in the execution of the test. Boys of <u>private</u> high schools 12,7 seconds while the girls 13,06 seconds.

50-meter race in m/s							
Public school girls	9-year-old girls GUEDES (1993)	Private school girls	10-yearold girls GUEDES (1993)	Public school boys	9-year-old boys GUEDES (1993)	Private school boys	10-yearold boys GUEDES (1993)
4,00 ± 0,33	4,99 ± 0,31	3,87 ± 0,41	5,20 ± 0,38	4,40 ± 0,31	5,28 ± 0,38	4,02 ± 0,60	5,61 ± 0,33

It is perceived that the average in the schools of Jacarezinho had been pretty lesser than the Londrina city ones for the GUEDES study (1993). As HAUBENSTRICKER & SEEFELDT (1986) apud GUEDES (1993) atribue the lesser performances of the young women in the tests of race of short distance the order disadvantages mechanics and functionary that occur parallel to the sexual maturation, associates the lesser levels of personal motivation for the accomplishment of motor tasks of this type. On the other hand, the young men are favored by the the sexual maturation, having still in their favor a bigger motivation. **4.3 Extension Jump:** In accordance with the measured data, was found for the explosive force of the children of public schools, the average value of 128,16 centimeters, being this bigger value than the average of the children of private schools, that was of 121,28 centimeters. In the comparison between sexies, there were differences between the schools, therefore, in the private schools the average value of the girls 116,76 centimeters was minor than the boys that was 124,55 centimeters, in the public schools the boys had presented 134,15 centimeters of average, being also bigger that the averages of the girls, that were 122,4 centimeters. However, in accordance with the general classification of ROCHA and CALDAS (1978), both schools, present a classified average as weak, being they below of 230 cm

Extension Jump in centimeters							
Public school girls	9-year-old girls GUEDES (1993)	Private school girls	10-yearold girls GUEDES (1993)	Public school boys	9-year-old boys GUEDES (1993)	Private school boys	10-yearold boys GUEDES (1993)
122,40 ±13,13	130,48 ±14,31	116,76 ±13,64	134,69 ±15,97	134,15 ±15,49	140,28 ±16,95	124,55 ±18,17	150,28 ±14,51

It is percieved above by the data that it compares the present study with the one of GUEDES (1993) that the index of our children with average of 9,18 years was lesser of the sample of GUEDES (1993) with children of 9 years old and pretty less than children of 10 years. **4.4 Test of Flexibility:** For the matter of flexibility, the average value of 28,07 centimeters was found for the children of public schools, and 26,18 centimeters for the children of private schools. In accordance with the classification of the CENTRO DE EXCELÊNCIA ESPORTIVO DA UFGRS (2001), the same was found inside average of the zone of demanded flexibility. In the public schools the boys had presented greater average flexibility than the girls, respectively: 29,53 and 26,66, once in the private schools occurred what it was expected, the girls had presented greater flexibility than the boys, however the difference was minimum, respectively: 25,94 and 26,5.

Seat-and-reach test in centimeters							
Public school girls	9-year-old girls GUEDES (1993)	Private school girls	10-yearold girls GUEDES (1993)	Public school boys	9-year-old boys GUEDES (1993)	Private school boys	10-yearold boys GUEDES (1993)
26,66 ±6,61	28,76 ±4,12	26,50 ±7,40	28,80 ±5,49	29,53 ±5,71	26,45 ±4,33	25,94 ±8,80	25,48 ±5,57

The boys of the public schools had been with the index of flexibility above of the average suggested for the CENTRO DE EXCELÊNCIA ESPORTIVO da UFGRS (2001) and the girls in the average, once in the private schools both sexies had been in the average. **4.5 Body mass index :** The measured data of stature and total corporal mass had been used for the calculation of BMI(Body mass index) that is the relation between weight by the stature square. Related to the BODY MASS INDEX , were found the expressive results of: Average value of 17,57 between the children of public schools, classified as sub-weight; Average value of 20,39 between the children of private schools classified as normal; among the children evaluated in the public schools, 65.7% are classified as low weight, inside of normality is 31.4% of the children and 2.9% were found overweight. In the children of private schools 46% are classified as sub-weight, 40% were found in normal condition and 10% in overweight situation. It is noticed that 4% of individuals are severe overweight.

BODY MASS INDEX			
Public school girls	Private school girls	Public school boys	Private school boys
17,25 ± 2,80	19,16 ± 3,19	17,90 ± 2,39	21,22 ± 5,82

It is perceived for the table above that the biggest index of low weight is found in the public schools and pre-overweight and overweight in the private schools, being the average value of BODY MASS INDEX of 17,57 in public schools and 20,39 in the private schools. **4.6 Body composition:** In relation to the percentage of corporal fat the following results were found: In the public schools the average value of fat percentage was 18,84, being in 21,10% girls and in boys the average was 16,5% of corporal fat, classified as adjusted. Being the total of boys adjusted, low, high and excessively moderately high. In the private schools the average value of the fat percentage was 23.47%, in 26,14% girls and in boys the average percentage was 21,53.

Fat Percentage			
Public school girls	Private school girls	Public school boys	Private school boys
21,10 ± 6,11	26,14 ± 6,71	16,50 ± 5,21	21,53 ± 8,48

The evaluation of the Body composition confirms the data gotten in the BODY MASS INDEX for the girls and shows that the percentage of fat of the private schools boys although the average be bigger than of the public schools, are found more individuals out of the standard of normality in such a way for more as for less. **4.7 Located Muscular Resistance: 4.7.1 Arm bending:** As the data were found an average of 11,45 arm bending in public schools and 8,52 in the private schools. The average of the feminine sex in the public schools was 12,25 once in private the 11,42 repetitions. In the masculine sex it was 10,61 in public and 6.41 in the private ones, this difference is given to the fact that the girls had carried through the test with the knee supported in the soil and the boys without this support.

Arm bending			
Public school girls	Private school girls	Public school boys	Private school boys
12,25 ± 9,47	11,42 ± 7,10	10,61 ± 6,54	6,41 ± 5,85

Abdominal bending: The average of abdominal carried through by pupils of public school was of 22,54 repetitions, in the private schools was of 28,6.Referring to the sexies the masculine sex had 23,96 in public and 26,89 in the private ones, once the feminine one had 21,18 in public and 30,95 in the private ones.

Abdominal bending							
Public school girls	9-year-old girls GUEDES (1993)	Private school girls	10-yearold girls GUEDES (1993)	Public school boys	9-year-old boys GUEDES (1993)	Private school boys	10-yearold boys GUEDES (1993)
21,18 ±6,15	25,54 ±6,91	30,95 ±12,27	25,65 ±6,17	23,96 ±5,22	29,62 ±5,43	26,89 ±15,22	30,94 ±5,02

In agreement with the table above comparing with the GUEDES study (1993)is noticed that the private schools were found more close to the average that the public. **4.8 Stature and Body Weight:** In the public schools the stature average was 1,33 meters and weight 31,62 kilograms, once in the private schools the average was 1,34 meters and weight 37,04 kilograms. The girls of public school had had a average 1,33 of height and 31.1 kilograms while that in the private school this average was 1,35 of stature and 35,34 kilograms. Once the boys had had a average of 1,33 meters and 32,15 kilograms in public school and 1,34 meters and 38,27 kilograms in the private schools.

Height average in centimeters							
Public school girls	9-year-old Girls GUEDES (1993)	Private school girls	10-yearold Girls GUEDES (1993)	Public school boys	9-year-old Boys GUEDES (1993)	Private school boys	10-yearold Boys GUEDES (1993)
133,74±8,48	131,88±5,12	135,38±6,11	134,45±6,39	133,80±5,71	132,24±5,79	134,27±6,55	136,88±5,84

The height average was found inside of the expected for the comparison with the GUEDES study (1993).

Weight average in kilograms							
Public school girls	9-year-old Girls GUEDES (1993)	Private school girls	10-yearold Girls GUEDES (1993)	Public school boys	9-year-old Boys GUEDES (1993)	Private school boys	10-yearold Boys GUEDES (1993)
31,10 ±7,39	28,20 ±4,98	35,34 ±7,52	29,77 ±5,29	32,15 ±5,45	29,79 ±5,05	38,27 ±10,72	31,99 ±5,95

The weight average was found reasonably over in the public schools and pretty over in the private schools when compared with the data collected by GUEDES (1993).

	Significant? (Y/N)	p
Age Private x Public	N	0,660
Height Private x Public	N	0,863
Weight Private x Public	N	0,552
Arm bending Private x Public	N	0,907
Abdominal bending Private x Public	N	0,093
Extension Jump Private x Public	N	0,115
50-meter race Private x Public	N	0,140
9-minute test Private x Public	N	0,217
Seat-and-reach test Private x Public	N	0,582
BMI Private x Public	N	0,328
Fat Percentage Private x Public	N	0,954

5. Final Considerations: This study made possible to evaluate the results of heart breathing condition, the speed performance, explosive force, flexibility and the Body composition of pupils of public and private schools, to compare them with the normality standard and to relate them, getting expressive differences about the conditions evaluated between the pupils, individual characteristics, as morphofunctional structure, sex, age and hereditary succession, as well as also the habits of life and levels of physical activity that are ways that exert direct influence on the physical capacities, as flexibility, explosive force, located aerobics and muscular resistance.

In the flexibility and power 9-minute race tests, the pupils of public schools had had better performance, whereas in the speed test and located abdominal muscular resistance, the pupils of particular schools had taken advantage, however in the test of arm bending the girls of private schools had taken advantage of the ones of public school, occurring the opposite with the boys. In the analyzes of the BODY MASS INDEX it is noticed that the overweight index is expressive in the private schools and of low weight in the public schools; the evaluation of the Body composition confirms this data for the girls and sample that the percentage of fat of the boys of the private schools although in the average to be bigger than the public schools were found more individuals out of the standard of normality in such a way for more as for less. It is noticed that a difference of qualities of physical aptitude occurs that must be generated by the different rhythm of life and alimentary standard adopted by the pupils of different social classes. A new research would be necessary correlating the daily activities of the pupils of the two groups, alimentary standard, among others, to be able to determine the accurate cause of this difference, what would be a suggestion for a future research.

6. Bibliographical references

MARINS, João C. Bouzas; GIANNICHI, Ronaldo S. **Avaliação & Prescrição de atividade física, guia prático**. Rio de Janeiro: Editora Shape, 2003.

PITANGA, Francisco Gondim. **Testes, medidas e Avaliação e educação física e esportes**. São Paulo: Editora Phorte, 2005.

FILHO, José Fernandes. **A Prática da avaliação física.** Rio de Janeiro: Editora Shape, 2003.

GHORAYEB, Nabil; BARROS, Turíbio. **O Exercício, Preparação Física, Avaliação médica, Aspectos Especiais e Preventivos.** São Paulo: Editora Ateneu**,** 1999.

BOUCHARD, Cloude. **Atividade Física e Obesidade.** São Paulo: Editora Manole, 2003.

MALINA, Robert; BOUCHARD, Cloude. **Atividade Física do Atleta Jovem do Crescimento à Maturação.** São Paulo: Editora Roca**,** 2002.

GUEDES, Dartagnan Pinto. **Composição Corporal: Princípio, técnicas e Aplicações.** Florianópolis: Editora Ceitec, s/d.

World Health Organization Diet. **Nutrition and prevention of chronic diseases.** Geneva: WHO, 1990.

GUEDES, Dartagnan Pinto; GUEDES, Joana Elisabete R. P. **Crescimento e desempenho motor em escolares do município de Londina, Paraná, Brasil.** Rio de Janeiro: Cad. Saúde Pública vol. 9, 1993.

MATSUDO, Victor K.R. **Testes em ciências do esporte.** São Caetano do Sul: Celafiscs, 2005.

MCARDLE, Willian D., KATCH, Frank I., KATCH, Victor L. **Fisiologia do Exercício.** Rio de Janeiro: Editora

Guanabara Koogan S.A., 1998.
WEINECK, Jurgen. **Atividade Física e Esporte Para Que?** São Paulo: Editora Manole, 2003. NEIMANN, David C. **Exercício e Saúde**. São Paulo: Editora Manole, 1999.
BARBANTI, Valdir José. **Aptidão Física: Um Convite a Saúde.** São Paulo: Manole, 1990.
WILMORE, Jack H.; COSTILL, David L., **Fisiologia do Esporte e do Exercício**. São Paulo Editora Manole, 1999.
GUEDES, Dartagnan Pinto; GUEDES, Joana E. P.. **Crescimento, composição corporal e desempenho motor de crianças e adolescentes.** São Paulo: CLR Balieiro, 1997.
NESPEIRA, Alfonso Blanco. **1000 Exercícios de Musculação**. Porto Alegre: Artmed, 2002. GIANNICHI, Ronaldo S.; MARINS, João C. Bouzas. **Avaliação & Prescrição de Atividade Física Guia Prático**, Rio de Janeiro: Shape, 2003.
BARBANTI, Valdir José. **Teoria e Prática do Treinamento Esportivo.** São Paulo: Edgar Blücher, 1979. ARAUJO, C. G. S. **Medidas e Avaliação em Flexibilidade**. 1987. Tese de Doutorado Apresentada ao Instituto de Biofísica da UFRJ. Rio de Janeiro: Universidade Federal do Rio de Janeiro.
American College of Sports Medicine Position Stand: Physical Activity, Physical Fitness, and Hypertension. **Medicine & Science in Sports & Exercise**, v. 25, n. 10, 1993.
ROCHA, Paulo Eduardo Pereira da, **Medidas e Avaliação em Ciências do Esporte.** Rio deJaneiro: Sprint, 2002.
BOILEAU, R. A.; LOHMAN, T.G.; SLAUGHTER, M. H. **Exercise and body composition of children and youth.** Scandinavian Journal of Sports Sciences, 7, 17-27, 1985.
MARINS, João C. Bouzas; GIANNICHI Ronaldo S. **Avaliação & prescrição de atividade física.** Rio de Janeiro: Shape, 1998.
Centro UFRGS de Excelência Esportivo, **PROJETO ESPORTE BRASIL**. Disponível em: < http://pages.udesc.br/~r7ladap/proespbrinf.htm> acesso em julho de 2006.

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EVALUATION OF THE BODY COMPOSITION, BMI, EXPLOSIVE FORCE, FLEXIBILITY, HEART BREATHING CONDITIONS AND SPEED IN CHILDREN OF PUBLIC AND PRIVATE SCHOOLS FROM JACAREZINHO CITY

Abstract

The heart breathing condition, the speed performance , the explosive force, flexibility, the Body composition and the Body mass index can be directly related to the daily habits and level of physical activities done daily, as well as the adopted alimentary standard. This study had as main objective to compare the qualities of physical aptitude as well as the Body composition and the Body mass index of children from 9 to 10 years old of different social classes, public schools of low income and private schools (n=103) A decriptive statistics was applied as standard average and deflection, the difference among the groups and was identified with the "t" test for students with independent measures. In the 9 minutes race, flexibility and power test the pupils of public schools had had better performance, but in the speed and located abdominal resistance, the particular schools pupils had taken advantage, however in the arm bending test the private school girls had taken advantage on the public school ones, occurring the opposite with the boys. In the analyzes of the Body mass index is notable that the overweight index is significant in the particular schools and of low weight in the public schools. The evaluation of the Body composition confirms this data for the girls and shows that the fat percentage of the private school boys although being bigger than the public schools average are found more individuals out of the standard of normality in such a way for more as for less.It is noticed that a difference of qualities of physical aptitude occurs that must be generated by the different rhythm of life and alimentary standard adopted by the pupils of different social classes, however there was no meaningful difference.

Keywords: physical aptitude, alimentary standard, social classes.

ÉVALUATION DE LA COMPOSITION CORPORELLE, IMC, FORCE EXPLOSIVE, FLEXIBILITÉ, CONDITIONS CARDIORESPIRATOIRE ET DE VITESSE DANS DES ENFANTS D'ÉCOLES PÚBLIQUES ET PARTICULIÈRES DE LA VILLE DE JACAREZINHO

Résumé

La condition cardiorespiratoire, le dégagement de vitesse, la force explosive, la flexibilité, la composition corporelle et l'IMC peuvent être directement rapportés aux habitudes quotidiennes et au niveau d'activités physiques réalisées quotidiennement, ainsi qu'à la norme alimentaire adoptée. Cette étude a eu comme objectif principal comparer les qualités d'aptitude physique ainsi que la composition corporelle et l'IMC d'enfants de 9 à 10 ans de classes sociales différentes, écoles publiques de bas revenu et écoles particulières. On a appliqué une statistique discrétive aveu moyema et écart, la différence entre les groupes est allé identifiée avec le test "t" d' etudiantes pour mesures indépendantes. Dans l'essai de course 9 minutes, de puissance et de flexibilité les élèves d'écoles publiques ont eu mieux dégagement, déjà dans l'essai de vitesse et de résistance musculaire localisée abdominal, les élèves d'écoles particulières ont pris avantage, néanmoins dans l'essai de flexion de bras les filles d'école particulière ont pris avantage sur celles d'école publique, en se produisant l'opposé avec les garçons. Dans l' analyse de l'IMC se remarque que l'indice d'obésité est plus expressif dans les écoles particulières et bas de poids dans les écoles publiques. L'évaluation de la composition corporelle confirme cette donnée pour les filles et montre que le pourcentage de graisse des garçons des écoles particulières malgré de la moyenne être plus grand de ce que des écoles publiques se trouvent plus personnes dehors de la norme de normalité tant pour plus que pour moins. On perçoit qui se produit une différence de qualités d'aptitude physique qui doit être produite par le différent rythme de vie et de norme alimentaire adoptée par les élèves de différentes classes sociales. Néanmoins, iln'avait pas différence significative.

Mots Clés: aptitude physique, norme alimentaire, classes sociales.

EVALUACIÓN DE LA COMPOSICIÓN CORPORAL, IMC, FUERZA EXPLOSIVA, FLEXIBILIDAD, CONDICIONES CARDIORRESPIRATORIAS Y DE VELOCIDAD EN NIÑOS DE ESCUELAS PÚBLICAS Y PARTICULARES DEL MUNICIPIO DE JACAREZINHO

Resumen

La condición cardiorrespiratoria, el desempeño de velocidad, la fuerza explosiva, la flexibilidad, la composición corporal y el I.M.C (índice de masa corporal) pueden estar directamente relacionados a los hábitos cotidianos y al nivel de actividades físicas realizadas diariamente, o bien al padrón alimenticio adoptado. Este estudio tuvo como objetivo principal comparar las cualidades de aptitud física así como la composición corporal y el I.M.C. de niños de 9 a 10 años de clases sociales

diferentes, de escuelas públicas de baja renta y escuelas privadas (n=103). Se aplicó estadística descriptiva con media y desvío padrón, la diferencia entre los grupos fue identificada con examen "t" de estudiante para medidas independientes. En la prueba de carrera de 9 minutos, de potencia y de flexibilidad los alumnos de escuelas públicas tuvieron mejor desempeño, ahora, en la prueba de velocidad y resistencia muscular localizada, abdominal, los alumnos de escuelas particulares tuvieron mejor desempeño, pero en la prueba de flexión de brazo las niñas de escuelas privadas tuvieron ventajas sobre las de la escuela pública, ocurriendo lo opuesto con los varones. En el análisis del IMC se nota que el índice de obesidad es más expresivo en las escuelas particulares y el de bajo peso en las escuelas públicas. La evaluación de la composición corporal confirma ese dato para las niñas y muestra que en el porcentaje de grasa de los varones de las escuelas privadas a pesar de que en promedio es mayor que los de las escuelas públicas se encuentran más individuos fuera del modelo de normalidad tanto para arriba como para abajo. Se percibe que ocurre una diferencia de cualidades de aptitud física que debe ser generada por el diferente ritmo de vida y modelo alimenticio adoptado por los alumnos de diferentes clases sociales, sin embargo no hubo diferencia significativa.

Palabras clave: aptitud física, modelo alimenticio, clases sociales.

AVALIAÇÃO DA COMPOSIÇÃO CORPORAL, IMC, FORÇA EXPLOSIVA, FLEXIBILIDADE, CONDIÇÕES CARDIORRESPIRATÓRIA E DE VELOCIDADE EM CRIANÇAS DE ESCOLAS PÚBLICAS E PARTICULARES DO MUNICÍPIO DE JACAREZINHO

Resumo

A condição cardiorrespiratória, a performance de velocidade, a força explosiva, a flexibilidade, a composição corporal e o IMC podem estar diretamente relacionados aos hábitos cotidianos e nível de atividades físicas realizadas diariamente, bem como ao padrão alimentar adotado. Este estudo teve como objetivo principal comparar as qualidades de aptidão física assim como a composição corporal e o IMC de crianças de 9 a 10 anos de classes sociais diferentes, escolas públicas de baixa renda e escolas particulares. Uma coleta de dados seguida de analise estatística com média total, média por sexo e seus respectivos desvios padrões foi realizada. No teste de corrida 9 minutos, de potência e de flexibilidade os alunos de escolas públicas tiveram melhor desempenho, já no teste de velocidade e resistência muscular localizada, abdominal, os alunos de escolas particulares levaram vantagem, porém no teste de flexão de braço as meninas de escola particular levaram vantagem sobre as de escola pública, ocorrendo o oposto com os meninos. Na analise do IMC nota-se que o índice de obesidade é mais expressivo nas escolas particulares e o de baixo peso nas escolas públicas. A avaliação da composição corporal confirma esse dado para as meninas e mostra que o percentual de gordura dos meninos das escolas particulares apesar de na média ser maior do que os das escolas públicas encontram-se mais indivíduos fora do padrão de normalidade tanto para mais como para menos. Percebe-se que ocorre uma diferença de qualidades de aptidão física que deve ser gerada pelo diferente ritmo de vida e padrão alimentar adotado pelos alunos de diferentes classes sociais.

Palavras Chaves: aptidão física, padrão alimentar, classes sociais.