133 - FITNESS FOR EACH SCHOOL SEX IN BASIC EDUCATION SERIES STARTED IN PHYSICAL EDUCATION ACTIVITY PIBID / IFPR

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INTRODUCTION

The scientific literature shows with solid data the impact of the development of physical fitness (AF) on health. Some factors of importance are highlighted, such as lower incidence of risk factors for chronic diseases, improving mental and physiological health, reduction of adipose tissue, and increased cognitive ability (KVAAVIK et al., 2009; ORTEGA et al., 2008). Another important point is that physical fitness has an association with the prevention of metabolic syndrome stronger than physical activity (RIZZO et al., 2007).

Guedes (2007) has proposed that fitness is divided into two main components: a health-related fitness (HRF), which encompasses the capabilities of muscular strength / endurance, cardiorespiratory endurance and flexibility, and fitness-related motor performance (AFRDM), which fall within the skills speed, agility, power (explosive strength), coordination and balance.

The analysis of physical fitness in schools, despite its importance, appears not as something common, a fact that is observed empirically in published studies in which physical activity has been the most frequent target of research and applications in the school setting.

Levels of physical fitness has shown a decreasing curve especially in recent decades, as several studies (MALINA, 1996; TOMKINSON and OLDS, 2007; WESTERSTAHL et al., 2007) and this makes their verification required for both knowledge of the profile student as to establish guidelines that can assist in the processes of health and quality of life of students.

It is important to observe the precepts Malina (1996) and later Twisk et al. (2000) reported that AF acquired during the periods of childhood and adolescence tend to persist into adulthood.

Given the above, this study includes the AF in young can be, in physical education classes, an important tool to measure the skills and abilities of students. How the Institutional Program Initiation to Teaching Scholarship (PIBID) aims to prepare the students in the case of this study, the area of Physical Education for insertion of future professionals in the school setting, preparing them to act later, the assessment of performance through related physical fitness tests becomes fundamental in the construction of these scholars, and should be engaging element in the activities related to the project.

Therefore, the aim of this study was to assess the level of physical fitness in relation to sex in school is a public institution of elementary education - early grades.

MATERIALS AND METHODS

The study was characterized as quantitative, cross-sectional and descriptive study conducted between the months of April and May 2013.

Characteristics of the sample

The sample was intentional , composed of 31 students, 19 males and 12 females, aged between 7 and 11 years enrolled in the Municipal School Oscar Rocker - Early Childhood Education and Elementary Education, the city of Palmas - Paraná - Brazil.

Collection instruments

The tests were applied according to the procedures outlined in the Manual Sport Project Brazil (PROESP, 2012) protocols were evaluated:

1 - Test explosive lower limb strength (standing long jump).

Material: A tape measure and a line on the ground.

Guidance: The tape was fixed to the ground and perpendicular to the starting line . The starting line was marked with masking tape. The zero point of the tape was located on the starting line. The subject was placed immediately behind the line, with the feet parallel, shoulder-width apart, knees unbent, designed torso slightly forward. To sign the student jumped the farthest distance possible landing with both feet simultaneously. Two attempts were made, and considered for evaluation purposes the best result.

Note: The distance of the jump was recorded in centimeters with a house after the comma from the line drawn on the ground to the nearest this heel.

2 - Test for flexibility (sit and reach).

Material: Tape and tape.

Orientation: a tape measure on the ground was extended. In the 38 cm mark this tape was placed a piece of tape 30 cm perpendicular. Duct tape fixed the tape measure on the ground. The subject was evaluated barefoot. The heels touched the tape in the mark of 38 cm, with 30 cm apart. With knees extended and overlapping hands, the reported leaned slowly and stretched his hands forward as far as possible. The subject remained in this position the time necessary for the distance to be recorded. Two trials were conducted.

Note: The result was measured in centimeters from the farthest position that the student has achieved the scale with his fingertips. We recorded the results with a house after the comma. For the evaluation we used the best result.

3 - Testing speeds (20m race).

Material: a stopwatch and a lead of 20 meters with three parallel lines marked on the ground was used as follows: the first (starting line), the second, 20m far from the first line (timing) and the third line, marked at a meter of the second (finish line). The third line served as reference for the arrival of students in an attempt to prevent him initiate the downswing before crossing

the timing line. Two types of PET bottles of 2 liters for the first and third signal lines.

Guidance: The student left the standing position, with an advanced standing in front immediately behind the first line (starting line) and was informed that should cross the third line (finish line) ASAP. At the sign of the evaluator, the student went , as fast as possible toward the finish line. The evaluator tripped the timer at the time the evaluated touched the ground first with one foot beyond the starting line. The timer was caught when a student crossed the second line (timing), touching the ground first.

Note: The timekeeper recorded the time of the route in seconds and hundredths of seconds (two places after the decimal point).

Application and statistical procedures

Applicators collection of measurements were academic participants Activity Physical Education PIBID/IFPR the Campus Palmas - PR, previously trained to administer the instruments used.

All subjects were informed about the objectives and procedures of the study and their parents signed a consent form. The study is part of the Physical Education Activity PIBID/IFPR.

Data were analyzed using descriptive statistics of mean and dispersion and is attested by the significance test ($p<0,05$) t -test for independent samples with post hoc Tukey test. SPSS ® version 20.0 was used for these statistical procedures.

RESULTS

The mean age of the children was 9.05 ± 1.87 years, while girls showed 8.5 ± 1.31 years.

The average values for each variable are described in Table 1 as well as the level of significance found. When arranged in the classification guided by manuals PROESP (2012), it appears that they are in parameters considered desirable for age, regardless of sex.

Data analysis showed no significant differences ($p<0,05$) between sexes for variables regarding the power of the lower limbs (standing long jump) and speed test (20m). However, flexibility (sit and reach test) showed a statistically significant, positive difference to the boys.

Table 1 - Comparison between average results and significance level of the variables measured between the sexes

	Boy (n=19)		Girl (n=12)		
	Mean	sd	Mean	sd	p
Horizontal Jump (cm)	121,16	30,85	115,67	19,94	,080
Flexibility (cm)	35,63	4,59	34,51	8,83	,019#
Velocity (20m)	4,20	0,76	4,26	0,97	,442

Statistically significant difference in favor of males.
$p<0,05$

On the power of lower limbs and speed, although there was no significant difference, boys had higher than average female. Flexibility, the significant difference was favorable to the boys, who were above the values opposite sex.

DISCUSSION

The study aimed to verify the level of physical fitness in relation to sex in school is a public institution of elementary education - early grades.

The measurement of physical fitness appears as an important landmark in the life of the school, can be also supporting the work of teachers of physical education tool. Considering the above by Luguetti, Ré and Böhme (2010), it is understood no need for programs aimed at fostering and developing that lead to improved levels of physical fitness.

In all tests girls had lower average scores for boys. The differences between the sexes may be motivated by a lower provision for regular physical activity for girls, which would explain why studies already show a strong relationship between the level of PA with physical activity, the age groups involving children and adolescents (SOLLERHED and EJLERTSSON, 2008; ROGOFF, 2005) .

With regard to the power (strength) of the lower limbs, there were no significant differences between the sexes. Nevertheless, it showed a better average performance among boys. The dwindling involvement of girls with situations related to physical activity may be the predictor of this difference, since the phase between 7 and 11 years usually are not differences in body composition that may be considered important between the sexes that may underpin obtained by the superiority of boys over girls (WILMORE and COSTILL, 2004). It is believed that the subjects of this study showed that reality because unless the interest of girls participating in activities that involve moderate to heavy physical effort, especially those related to strength. Thus, it is possible that such an attitude is distinguishing factor between the results obtained with the male subjects and the female sex.

On the question concerning flexibility, there was significant difference favorable to boys. Other studies have indicated that boys perform better on several variables of motor development, including flexibility (GUEDES, 2007; DUMITH et al., 2010; ARRUDA and OLIVEIRA, 2012). Barros et al. (2011) indicate that the lowest degree of flexibility was related to female: low participation in physical activity, muscle rigidity, and abnormalities in muscle tone.

For this group, we believe that the results are caused by self-interest in performing activities for the exercise and / or physical activity, as during the activities in the project developed, the girls seem to have less interest and motivation in implementing practices proposed, which can be reflected in the performance tests agent.

In the situation inherent speed, although boys also present higher values than girls, this was not significant. Dumith et al. (2010) in a study with students from Rio Grande do Sul found similar results, including the average ratio in both sexes. Luguetti et al. (2010) suggest that the results may again be a reflection of social change occurred in girls who have increasingly early interest in issues of adulthood, while boys stay longer geared to the activities of childhood and adolescence, which gives them greater interactivity with physical practice, and hence better performance related physical fitness tests.

In this study, it is understood that the lower participation of girls in activities related to physical performance is being the key factor for the design of these results.

CONCLUSION

In the three variables related to physical fitness constants of this study, there was superior performance by males, which may be related to a lower share of female children in physical activity.

There was no significant difference between genders in lower limb power and speed.

The flexibility of boys was higher than girls, significantly, suggesting that in childhood, male subjects have motor that female performance.

The limitation of this study is its cross-sectional nature, which does not identify the causes of the differences found here. Thus, it is suggested that further studies be conducted, in order to clarify which aspects affect the performance issues related to physical fitness school.

Seems to be necessary to make programs that include mainly intended for girls in physical activity environments, and within schools this content is constant approach, seeking to assist in awareness of the need to move, as well as contributing to improved quality frameworks health.

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ABSTRACT

Introduction: The scientific literature shows the development impact of physical fitness on health. Objective: To assess the level of physical fitness in relation to sex in school is a public institution of elementary education - early grades. Methodology: A descriptive cross-sectional quantitative study. 31 students were studied, 19 males and 12 females, aged between 7 and 11 years, physical fitness tests proposed by PROESP being applied: 1 - Testing power of lower limbs; 2 - Test flexibility; 3 - Test speeds (20m race). Data were analyzed using descriptive statistics of mean and dispersion and is attested by the significance test ($p<0,05$) t -test for independent samples with post hoc Tukey test. Results: Data analysis showed no significant differences ($p< 0,05$) between sexes for variables regarding the power of the lower limbs (standing long jump) and speed test (20m). However, flexibility (sit and reach test) showed a statistically significant, positive difference to the boys. Conclusion: Boys performed better than girls in all three variables, being only significant difference in flexibility. Seems to be necessary to make programs that include mainly intended for girls in physical activity environments, and within schools this content is constant approach, seeking to assist in awareness of the need to move, as well as contributing to improved quality frameworks health.

KEYWORDS: Physical fitness. Speed. Strength. Flexibility.

RÉSUMÉ

Introduction: La littérature scientifique montre l' impact sur le développement de la condition physique sur la santé. Objectif: Évaluer le niveau de condition physique en fonction du sexe à l'école est un établissement public d'enseignement primaire - premières années. Méthodologie: Une étude quantitative descriptive, transversale. 31 étudiants ont été étudiés, 19 hommes et 12 femmes, âgés entre 7 et 11 ans, les tests de conditionnement physique proposées par PROESP appliquées: 1 - puissance des membres inférieurs; Test 2 - test flexibilité; 3 - vitesses d'essai (de course de 20m). Les données ont été analysées à l'aide des statistiques descriptives de moyenne et de la dispersion et est attestée par le test de signification ($p<0,05$) test t pour échantillons indépendants avec test de Tukey a posteriori. Résultats: L'analyse des données a montré aucune différence significative ($p<0,05$) entre les sexes pour les variables relatives à la puissance des membres inférieurs (saut en longueur) et de test de vitesse (20 m). Toutefois, la souplesse (flexion du tronc test) a montré, une différence positive statistiquement significative pour les garçons. Conclusion: Les garçons ont mieux réussi que les filles dans tous les trois variables, étant seule différence significative en termes de flexibilité. Semble nécessaire de faire des programmes qui incluent principalement destinée aux filles

dans des environnements d'activité physique, et dans les écoles ce contenu est l'approche constante, à la recherche pour aider à sensibiliser à la nécessité de se déplacer, ainsi que de contribuer à l'amélioration des cadres de qualité santé.

MOTS-CLÉS: Forme physique. Vitesse. Force. Flexibilité.

RESUMEN

Introducción: La literatura científica muestra el impacto en el desarrollo de la condición física en la salud. Objectivo: Evaluar el nivel de condición física en relación con el sexo en la escuela es una institución pública de educación primaria - los primeros grados. Metodología: Estudio cuantitativo descriptivo, transversal. Se estudiaron 31 estudiantes, 19 hombres y 12 mujeres, con edades comprendidas entre los 7 y 11 años, las pruebas de aptitud física que propone PROESP están aplicando: 1 - Prueba de potencia de las extremidades inferiores; 2 - Prueba flexibilidad; 3 - velocidades de prueba (la raza 20m). Los datos se analizaron mediante estadística descriptiva de media y dispersión y se atestigua por la prueba de significación ($p<0,05$) t -test para muestras independientes con el test post hoc de Tukey. Resultados: El análisis de datos no mostraron diferencias significativas ($p<0,05$) entre sexos para las variables relativas a la fuerza de los miembros inferiores (salto en largo) y la prueba de velocidad (20 m). Sin embargo, la flexibilidad (sentarse y alcanzar) mostró una diferencia estadísticamente significativa y positiva para los chicos. Conclusión: Los niños obtuvieron mejores resultados que las niñas en las tres variables, siendo única diferencia significativa en la flexibilidad. Parece ser necesario realizar programas que incluyen principalmente destinados a las niñas en entornos de actividad física, y dentro de ellas escuelas de este contenido es el enfoque constante, tratando de ayudar a la conciencia de la necesidad de avanzar, así como contribuir a la mejora de los marcos de calidad la salud.

PALABRAS CLAVE: Aptitud física. Speed. Fuerza. Flexibilidad.

APTIDÃO FÍSICA EM FUNÇÃO DO SEXO EM ESCOLARES DO ENSINO FUNDAMENTAL SÉRIES INICIAIS NO SUBPROJETO DE EDUCAÇÃO FÍSICA DO PIBID/IFPR

RESUMO

Introdução: A literatura científica evidencia o impacto do desenvolvimento da aptidão física sobre a saúde. Objetivo: Verificar o nível de aptidão física de em função do sexo em escolares de uma instituição pública de ensino fundamental – séries iniciais. Metodologia: Estudo descritivo, transversal e quantitativo. Foram pesquisados 31 alunos, sendo 19 do sexo masculino e 12 do sexo feminino, com faixa etária entre 7 e 11 anos, sendo aplicados os testes de aptidão física propostos pelo PROESP: 1 – Teste de força explosiva de membros inferiores; 2 – Teste de flexibilidade; 3 – Teste de velocidade de deslocamento (corrida de 20m). A análise foi efetuada por meio da estatística descritiva de média e dispersão, sendo a significância atestada pelo teste t de Student ($p<0,05$) para amostras independentes tendo como post hoc o teste de Tukey. Resultados: A análise dos dados não evidenciou diferenças significativas ($p<0,05$) entre os sexos para as variáveis relativas a potência de membros inferiores (salto horizontal) e velocidade (teste de 20m). No entanto, a flexibilidade (teste de sentar e alcançar) apresentou diferença estatisticamente significante, favorável aos meninos. Conclusão: Meninos tiveram melhor desempenho que meninas nas três variáveis analisadas, sendo que somente houve diferença significativa na flexibilidade. Parece ser necessário efetuar programas que incluam principalmente meninas nos ambientes destinados à atividade física, e que dentro das escolas esse seja um conteúdo de constante abordagem, procurando auxiliar na consciência acerca da necessidade de movimentar-se, assim como contribuindo para melhoria dos quadros qualitativos de saúde.

PALAVRAS-CHAVE: Aptidão física. Velocidade. Força. Flexibilidade.