25 - PHYSICAL EDUCATION: CONTRIBUTING TO THE PERFORMANCE OF PHYSICAL SCHOOL

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INTRODUCTION

Being healthy is not just a matter of being or not being sick, you need to have characteristics that differ from risk factors for diseases. If a child has a deficit in its growth performance and longer engine provides the development of diseases (Guedes, J; GUEDES, D., 1997).

Motor performance is the term often used to group the various components of health-related physical fitness (muscular strength, muscular endurance, aerobic endurance, joint flexibility and body composition) and performance (movement speed , agility , coordination , balance and energy) together. The motor performance is associated with the ability to perform motor tasks and their study is based on the product, in terms of: "how far?", "How fast?", "How many times?" (GALLAHUE, 2005).

Ronque et al. (2007) confirm that the regular practice of physical education contributes to the development of flexibility, favorable body composition, strength of upper and lower limbs, agility and endurance that we call development indices of physical fitness, which ultimately contributes to the development of public health risks of decreasing incidence of several chronic and degenerative disorders at an early age and also in the prevention of diseases.

Due to this important factor mentioned above, Bergmam et al. (2005) call attention to the importance of working levels of fitness during classes at school, because for many physical education classes are the only moments of guided physical activities in their lives.

To Dumith; Azevedo Junior; Rombaldi (2008), the teacher has a fundamental role to contribute to the development of physical fitness and develop strategies to achieve them. Pellegrini et al. (2011), see in motor intervention programs for the promotion of physical fitness standards, a special need to work to provide a better motor performance, since the development of physical fitness nowadays is very poor so there is a continuity of health hazards if not worked.

Guedes, J; Guedes, D. (1997), report the need for a change in existing programs , it is rather found in schools practices which lead to the development of physical working since the intensity levels of physical effort than the lower limit required for the functional changes occur better functioning organic.

Considering that physical education classes should be an important favor for the development of physical performance. Lorenzi et al. (2005) discuss the importance of physical assessment so that we can find what the main weaknesses of our group are and elaborate a specific job to contribute to the development of physical fitness.

Forte and Mascarenhas (2010) reinforce this idea by questioning the need to assess the level of physical fitness that we may know our group and the real difficulty of them with respect to development and be able to implement activities that contribute to building standards more advanced since the development of physical fitness contributes to better performance in execution of motor activities during childhood to adulthood (PELEGRINI et al. 2011).

Thus, this study aims to investigate the influence of physical education classes in school physical performance. For both , will be assessed the level of physical fitness in school and after 12 weeks of physical education class will analyze the changes in the physical performance of the students. We hypothesized that the intervention program will contribute to the physical performance of the subjects.

METHOD

Participants

This research has features pre -experimental descriptive and explanatory, as aimed to describe and discuss the changes in the physical performance of a single group (Gil, 1991). The study population was composed of 40 students of both sexes aged 9-10 years enrolled in a public school located in the Alto Tietê.

Instruments

The subjects of this study participated in an intervention program consisting of 24 lessons. Before and after the program had their fitness level assessed from indicators of Project Sport Brazil (PROESP) (GAYA AND SILVA, 2007), which assesses health indicators through physical fitness tests.

Regarding the assessment of physical fitness tests proposed by PROESP are: Anthropometric measurements (weight and height), Flexibility, Agility, Strength explosive upper limb, lower limb explosive strength, abdominal strength and speed. The application of the test lasts approximately 25 minutes per person.

We also conduct a semistructured interview with the subjects in order to further clarify the results and / or discussion of the research. The questions have to investigate whether subjects had physical education in regular series earlier study and practice some sport or physical activity outside of school.

Procedure

After signing the informed consent by the parents or guardians of the subjects was initiated the proposed work. The subjects were evaluated at the school where they study in one day pre - determined according to the availability of the school. To collect performance data physical subjects were dressed in pants or shorts and sneakers tissue.

We track over 24 classes, about 12 weeks, the physical education classes that were held 2 times a week for 50 minutes. These classes were observed for the notation of student attendance and objectives, contents and methods of classes. These observations were made in all classes taught during 12 weeks.

Before (pretest) and after (post-test) the 12 weeks of class evaluated the physical performance of individuals through tests PROESP. Data collection of pre and post -test lasted five days before each and were held in a sports provided by the school. A semi-structured interview was also conducted with students in the school one day after the end of the second data collection.

Data Analysis

Data were presented as measures of central tendency (mean) and dispersion (standard deviation). For statistical analysis underwent an initial test of Shapiro -Wilk normality after verification of normality of the same t test was used to compare pre -and post- test. The data were processed through the computer package SPSS 19 for Windows, and the significance level of $p < 0.05$. The physical education classes, as well as semi-structured interviews were presented and discussed through the descriptive analysis.

RESULTS

For the tests evaluated the results show significant differences between intra genres and genres to the moments before and after collection, these data are presented below in Tables 1 and 2.

Table 1 - Mean, standard deviation and significant gender difference in the pre and post - tests for testing body mass index (BMI), Flexibility (FLE), Force resistance abdominal (FRB), Explosive power of lower limb (PLL), Explosive power of upper limb (PUL), Agility (AGI) and Speed (SPE). * Significant difference ($p \leq 0.05$) when comparing genders for the above tests.

	GIRLS			BOYS		
TEST	**PRE**	**POST**	***p***	**PRE**	**POST**	***p***
BMI	18,07±3,48	17,78±3,30	0,045	16,86±2,35	16,85±2,30	ns
FLE	35,05±8,50	39,66±7,57	0	32,59±6,56	39,04±7,88	0
FRB	23,88±7,69	26,55±6,98	0,013	27,31±6,35	32,09±9,09*	0,016
PLL	118,77±16,75	113,66±16,10	ns	135,77±20,98*	137,63±19,43*	ns
PUL	177,94±29,96	191,55±37,20	ns	195,90±42,48	224,50±34,10	ns
AGI	8,67±0,79	8,01±0,65	0,002	8,07±0,77*	7,67±0,78	0,014
SPE	4,86±0,78	4,67±0,38	ns	4,72±0,71	4,65±1,25	ns

Table 2 - Qualitative results of tests obtained by averaging. Categories Physical Fitness: Very Weak (VW), Weak, Fair, Good, Very Good (VG) and Excellent (EX).

	GIRLS		BOYS	
TEST	**PRE**	**POST**	**PRE**	**POST**
BMI	NORMAL	NORMAL	NORMAL	NORMAL
FLE	GOOD	VG	FAIR	VG
FRB	FAIR	GOOD	FAIR	GOOD
PLL	FAIR	VW	FAIR	FAIR
PUL	WEAK	VW	FAIR	VW
AGI	VW	VW	VW	WEAK
SPE	VW	VW	VW	VW

To test BMI boys and girls present in normal pre -and post- tests (Table 2), however, girls had a significant improvement in posttest. The children also had improvements, but not significant (Table 1). In the test of flexibility is worth noting a significant improvement for both genders (Table 1), the girls did the classification of good to very good (Table 2).

By analyzing the test results of abdominal strength found that both boys and girls had significant improvement in post-test, both were initially classified as reasonable and passed for good. When comparing genders boys exhibit significantly higher values in the post - test ($p = 0.036$) compared with girls (Table 1 and 2).

To test the strength of lower limbs identified a significant difference only in the comparison between genders, where the boys have both pre -test and post values superior. In the test of upper limb strength and speed were no significant differences between and within - gender (Table 1 and 2).

In agility test in qualitative classification both genders are lower than expected (very weak) (Table 2), however, a significant improvement is noticed girls as boys in the comparison between the pre and post - test. We can also see that the boys have significantly better results than girls in the pre -test (Table 1).

The content used in physical education classes was composed of 12 lessons of athletics, futsal 6 of 6 classes and judo, all classes had as part of the initial 10 minutes of stretching, 15 minutes of heating with games and activities and also the main part with fundamentals of modalities, where the objectives were achieved.

Regarding the semi-structured interview by the first question, whose aim was to investigate whether the subjects had regular physical education in the earlier series found that only one boy did not participate in physical education classes every other regularly participated . Among the contents learned students cited more frequently sport and struggles, some have cited games.

The second question sought to ascertain whether students practice some regular exercise outside of school hours , we identified only 2 girls and 5 boys who practiced football once or twice a week and 1 girl and 2 boys who practiced twice weekly fights. In the third and final issue we found that most of the boys "play ball" and video game in leisure time, when they are not in school. Most girls play of "household", ride bikes and watch television.

DISCUSSION

The present study aimed to verify the influence of physical education on physical performance of students, to evaluate both the students before the beginning of classes, did the monitoring of lessons and after 12 weeks returned to evaluate them again.

Regarding BMI can observe a significant improvement only for girls. Werk, Vieira et al (2009) in their study applied to children (Ages 9.07 ± 1.15) of a state school in the city of Campo Grande - MS found different results to find that our boys had better indices of BMI than girls.

Already Dumith; Azevedo Junior and Rombaldi (2008) evaluated the school in the city of Rio Grande, RS enrolled in primary private network as much of the public indicate that the BMI was not significant when comparing genders . Similar results were shown by Bergman and Araujo et al. (2005) who studied longitudinally a group of 61 students enrolled in a private school in

the city of Canoas RS - evaluated where both genders and found no significant differences between pre and post.

In our study, a point to be detachable is the significance of the indices of flexibility because, both boys and girls improved with the posttest, however girls show significantly greater improvement. According to Gallahue and Ozmun (2005) girls should really have development index greater flexibility when compared with that seen among boy's ages 10 to 16 years they develop greater stretchability and elasticity of the muscles and tissues.

Corroborating our findings other studies have also found that the flexibility of the girls is significantly better compared with boys (Serrasuelo Junior et al. (2005), Pellegrini, Silva, Petroski and Glaner (2011); Dumith, Azevedo Junior and Rombaldi (2008).

Notably, despite the girls present significant values better than the boys , we can see the improvement of the boys was very large which is aligned with findings in other studies in which children have the best rates for participating more actively in physical education classes. Verardi et al. (2007) Werk, Vieira et al. (2009) also found noticeable difference in flexibility due to class accompanied present much of its content with the presence of initial stretching.

According to Roman (2004) Indices inadequate abdominal strength may be associated with problems of failing to support the spine, due to weak strength in the abdomen, so it is extremely important to develop activities that work your abdomen. The subjects of this study initially showed reasonable level for abdominal strength , as well as children and adolescents from other studies , however, after physical education classes was presented significant improvement.

Verardi et al, (2007); Andreasi et al. (2010) and Pellegrini et al. (2011) also identified low abdominal strength in children and adolescents and associate this factor to the low level of physical activity presented by his group. These authors suggest an activity program specifically aimed at strengthening the abdominal muscle.

Bergman and Araujo et al. (2005) analyzed the abdominal strength of 61 school children from a private school through a longitudinal study. After completion of one year of a physical education program consisted not significant difference between the variables of muscle strength/endurance abdominal. The authors argue that in developing the child acquire muscle strength, but with the suffering of anatomical loses coordination which alters their development capacity. So suggests a specific program for the development of strength of these muscles.

In our study we believe that the physical education program was responsible for the good performance presented by the subjects in the post - test, since classes were worked exercises that required capacity muscular strength /endurance. However, we believe that the program was not applied beneficial for the development of higher strength member because the subject did not achieve satisfactory results.

However, Lorenzi et al (2005) in their sample of 6794 children and adolescents found that the values of upper limb strength increase with time and the girls are stabilized at 16 and 17 years, however boys still have higher values all ages. Preux and War (2006) evaluated Judo practitioners aged 7-13 years and found good values of upper limb strength , this finding may be related due to be a judo practice where force is used a lot for your practice.

For values of lower limb strength did not observe improvement in post - test. We understand that more specific exercises are also needed to develop these muscles. Results similar to ours were also found by Lorenzi et al. (2005). The authors analyzed boys and girls and observed levels of strength in the lower limbs below the reasonable mostly ranked between weak and very weak.

When comparing genders boys showed more strength in the lower limbs. Studies Verardi et al. (2007) reinforce this fact. Bortoni and Bojikian (2007) evaluated the agility of 87 boys, where 50 participating in a school sports showed improvement in agility, which was not observed with the other 37 who were part of the control group and not participate in any physical activity. Preux and Guerra (2006) also found that a group of boys judo is good development agility. These results corroborate with the present study, since through physical education classes was possible to notice significant improvement between the pre and post-test, evidencing the relationship between practice and increase agility.

The velocity index of the subjects of this study was classified as very weak. Some research, as analyzed by Verardi et al. (2007) Krebs et al. (2011) and War and Preux (2006) also identify some development of this variable in their subjects, most of who were classified as fair, poor and very poor.

We demonstrate an improvement in physical performance of students through classes focused on health development. Classes contributed analyzed for major indices on flexibility, abdominal strength and agility.

Although the results show clearly an improvement in the rate of development of the subject, we can mention the development influenced by the sexual maturation also contributed to an improvement of the results for Guedes and Guedes J, D (1997) Development pre - puberty contributes to a increase in the physical development of children because most children reaches its peak maturational development with the onset of adolescence.

CONCLUSION

Through this research we found that intervention programs planned when motor can contribute to the development of children's physical performance. It is for physical education professionals make use of assessment tools to identify developmental delays and plan effective programs for the promotion of health.

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PHYSICAL EDUCATION: CONTRIBUTING TO THE PERFORMANCE OF PHYSICAL SCHOOL

ABSTRACT

Nowadays there are few existing opportunities for physical activity, as it increasingly shows the importance of physical education teacher in order to guide their students to become physically active thus reducing the risk of disease. Thus the aim of this work was to verify the influence of a motor intervention on physical performance of schoolchildren. Therefore we evaluated the physical performance of 40 students aged between 9 and 10 years through analysis of health indicators related to physical fitness Sport Project proposed by Brazil, the test were: body composition, flexibility, abdominal strength, lower limb strength and superior agility and speed. The evaluation was performed before and after application of 24 physical education classes. The results indicated that physical education classes were beneficial to students especially in the increasing flexibility, abdominal strength and agility. We also investigated the moments where the subjects perform physical activity and found that the school is the only time where subjects have physical education activities, evidencing the importance of planning for physical education programs that seek health development.

KEYWORD: Physical Fitness, High School, physical performance.

ÉDUCATION PHYSIQUE : CONTRIBUER AU RENDEMENT DU ÉCOLE PHYSIQUE

RÉSUMÉ

Aujourd'hui, il existe quelques possibilités existantes de l'activité physique, car il montre de plus en plus l'importance de professeur d'éducation physique afin de guider leurs élèves à devenir physiquement actif réduisant ainsi le risque de maladie. Ainsi, le but de ce travail était de vérifier l'influence d'une intervention du moteur sur la performance physique des écoliers. Par conséquent, nous avons évalué la performance physique de 40 élèves âgés entre 9 et 10 ans à travers l'analyse des indicateurs de santé liés au projet sportif de remise en forme physique proposé par le Brésil, le test étaient: la composition du corps, la souplesse, la force abdominale, force des membres inférieurs et agilité et la vitesse. L'évaluation a été réalisée avant et après l'application de 24 cours d'éducation physique. Les résultats indiquent que les classes d'éducation physique ont été bénéfiques pour les étudiants en particulier dans la souplesse, la force et l'agilité abdominale augmente. Nous avons également étudié les moments où les sujets de l'activité physique et constaté que l'école est le seul moment où les sujets ont des activités d'éducation physique, ce qui prouve l'importance de la planification des programmes d'éducation physique qui visent le développement de la santé.

MOTS - CLÉS: condition physique, lycée , la performance physique .

EDUCACIÓN FÍSICA: CONTRIBUIR A LA EJECUCIÓN DE LA ESCUELA FÍSICA

RESUMEN

Hoy en día hay pocas oportunidades existentes para la actividad física, ya que muestra cada vez más la importancia del profesor de educación física con el fin de guiar a sus estudiantes a ser físicamente activo reduce el riesgo de la enfermedad. Así, el objetivo de este trabajo fue verificar la influencia de una intervención de motor sobre el rendimiento físico de los escolares. Por lo tanto, se evaluó el rendimiento físico de los 40 alumnos de edades comprendidas entre 9 y 10 años a través del análisis de los indicadores de salud relacionados con el proyecto deportivo condición física propuesta por el Brasil, la prueba fueron: composición corporal, flexibilidad, fuerza abdominal, fuerza de miembros inferiores y la agilidad y velocidad superior. La evaluación se llevó a cabo antes y después de la aplicación de las 24 clases de educación física. Los resultados indicaron que las

clases de educación física son beneficiosas para los estudiantes, especialmente en el aumento de la flexibilidad, fuerza abdominal y agilidad. También investigó los momentos en los que los sujetos realizan actividad física y encontramos que la escuela es el único momento en que los sujetos tienen actividades de educación física, lo que evidencia la importancia de la planificación de los programas de educación física que buscan el desarrollo de la salud.

PALABRAS CLAVE: Acondicionamiento Físico; High School; El rendimiento físico.

EDUCAÇÃO FÍSICA: CONTRIBUINDO PARA O DESEMPENHO FÍSICO DE ESCOLARES

RESUMO

Nos dias atuais poucas são as oportunidades existentes para a prática de atividade física, visto isso cada vez mais se evidencia a importância do professor de educação física, a fim de orientar seus alunos a se tornarem ativos fisicamente diminuindo assim o risco de doenças. Dessa forma o objetivo desse trabalho foi verificar a influência de uma intervenção motora no desempenho físico de escolares. Para tanto foi avaliado o desempenho físico de 40 escolares com idades entre 9 e 10 anos através de análise de indicadores de saúde relacionados a aptidão física proposto pelo Projeto Esporte Brasil, os teste foram: composição corporal, flexibilidade, força abdominal, força de membro inferior e superior, agilidade e velocidade. A avaliação foi realizada antes e após a aplicação de 24 aulas de educação física. Os resultados indicaram que as aulas de educação física foram benéficas para os alunos em especial no aumento dos índices de flexibilidade, força abdominal e agilidade. Também foi investigado os momentos onde os sujeitos realizam atividade física e constatado que a escola é o único momento onde os sujeitos possuem instrução de atividades física, ficando evidente a importância do planejamento de programas de educação física que busquem o desenvolvimento da saúde.

PALAVRAS – CHAVE: Aptidão Física, Ensino Médio, Desempenho físico.