150 - ADAPTATIVES ANSWERS OF THE MOTOR COORDINATION AND BALANCE IN GIRLS OF 7 YEARS DECURRENT OF THE PRACTICAL OF OLYMPIC GYMNASTICS AND THE PRACTICAL OF CURRICULAR PHYSICAL EDUCATION IN THE CITY OF RIO DE JANEIRO

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INTRODUCTION

With the evolution of the species, the human being started to remain in the biped position through the balance thereby adaptations that occurred during the evolutive process and the psychomotor development for acquisition of the biped position, opposing it the action of the gravity.

The necessities of motor coordination and balance are essentials; are considered basic to keep any position and to carry through the multiple tasks of the daily. However, the individual will have to learn to co-ordinate efficiently its body as to balance itself in its feet in the space and the time. This fact occurs with the maturation of the nervous system, concomitantly with the proffer of exogenous stimulations as stimulation-reply form.

Being the Olympic Gymnastics one of the older and popular sportiest modalities of the Olympic program, and having been in the Olympic games of 2004 the modality that more generated expectations in the Brazilian population due the great variety of artistic movements, dynamic and static, of difficult coordination constituted of extremely seductive plastic beauty. This activity presents in its base, natural movements, thus adaptable, what it leads to an improvement of the motor coordination and the balance only for the practice.

Through the Olympic Gymnastics a varied work of exercises becomes possible that influence all on the locomotive device, assisting in the development of the cognitive domain and proprioception (TSUKAMOTO, M. H. C; NUNOMURA, M., 2003). Stimulating other qualities as creativity, the perseverance and courage (WERNER, 1994).

According to some authors (Féderation Internacionale de Médicine Sportive, 1997; FORJAZ, the 2002) the practice of physical activities has fundamental importance for the maturational process of the individuals.

Considering motor learning as phenomenon resulting from practical and experience and, moreover, that the variability and diversity of practical can benefit the learning (Schmit, 2003), probably the Olympic Gymnastics can consist in a potential experience in the motor coordinative development of these children.

According to Bel et al (1997), affirms that the general trend to evaluate a performance of a person in accordance with the excellency standard and to reach the success in the performance feeling the pleasure in a successful performance is in accordance with the motivation for learning.

According to Magill (1989), the learning relates to the change in the capacity to execute activities, which appear in function of the practice, thus improving permanently the performance. With this it is knew that many individuals opt to the Olympic Gymnastics to develop its corporal capacities that can be transferred to other sportive modalities or situations of life. Thus the Gymnastics can be practiced since the recreational levels until the competition levels (FEENEY, 1993).

However Damazio (2000) alleges that of the seven to the ten years it is the moment of deep changes in the form as the children perceive the proper reality and itself. Taking itself in consideration that the dexterity suffers its maximum impulse from growth of the 7 years until the beginning of the puberty (STEMMLER, 1977, p.278; HIRTZ, 1976, p.385). In this age also can be observed according to Bringmann (1973, p.846), a faster maturation of the central nervous system.

Through this research it was intended, to contribute for the studies of the nature of the learning human being, being investigated the results of the adaptive answers of the motor coordination and the balance, with objective to identify the differences in relation to same the decurrently of the practical of Olympic Gymnastics in girls of 7 years, when compared with girls that they participate only of a regular program of Curricular Physical Education.

Being based on inherent theoretical citations to this research, one searched then to clarify if it occurred an improvement of the adaptive answers of the motor coordination in girls of 7 years decurrently of the practical of Olympic Gymnastics and the practical one of the Curricular Physical Education in the City of Rio de Janeiro. Arising itself as investigative hypothesis the estimated one of that inserted children in programs of learning of Olympic Gymnastics would present superiority in proficiency in the balance and coordination in relation the inserted children only in a regular program of Curricular Physical Education.

METHODOLOGY

Sample

The sample, not probabilistic type, By 28 volunteers girls, students that attend a public school of the Rio de Janeiro's City, who made Olympic Gymnastics exclusively, and girls that attend a public school of the Rio de Janeiro's City and through the lessons only by Curricular Physical Education Program. All the girls have seven years, 14 attended the classes of Gymnastics in a Sportive Center and they excessively only made pertaining to school physical education in Municipal College of the Zone West of the City of Rio de Janeiro.

It was forwarded to the institutions and the responsible for the girls, an authorization term to be allowed the participation and accomplishment of the study with the children.

Instruments

To evaluate the individuals was used 2 sub-tests of coordination of the complete battery of Bruininks-Oseretsky's motor proficiency (1974), being one on the bilateral coordination and balance with the purpose to measure the performance of the specific motor abilities and the balance.

Its high trustworthiness and validity had been the basic aspects for the election of this test for this research. Its shortened form makes possible a fast and efficient way of if measuring the performance of a great number of children in a stated period of time relatively reduced.

Sub-test 2 evaluated the balance and was composed for two items. The first item evaluated the static balance, where the individual would have to remain it balanced of foot with the leg preferred in the balance bar, with the open eyes. The other leg would have to be with the thigh bent in an angle of 90° with the hip (lame parallel to the ground).

The examiner would lock up the attempt in case that the executant's left the balance bar, touched the other foot in the soil or in the proper bar or the thigh he left the definitive angle. The individual carried through two attempts where the best time was written down, being the maximum time of 10 seconds. The punctuation was gotten according to Table 2.

Table 2 Punctuation of Item 1 of Sub-test 2.

Sub-test 1 – Item 1

1st Trial _____ sec 2nd Trial _____ sec

Obtained Score	0	1-2	3-4	5-6	7-8	9	10
Points	0	1	2	3	4	5	6

The second item of Sub-test 2 evaluated the dynamic balance. The individual would have to walk in the bar of balance of a special form. The contact of the foot with the bar occurred of the following form: initially the heel was placed, then the middle of the foot until the last contact of the foot, the tip. The heel of a foot would have to be placed soon to the front, in contact with the fingers of the foot that already was in the bar. The hands would have to be in the waist. 6 steps for attempt had been carried through and a total of 2 attempts. The punctuation was of the form as if it presents in Table 3.

Table 3 Punctuation of item 2 of Sub-test 2

Sub-test 2 – Item 2

1st Trial ☐☐☐☐☐☐ = ____ steps 2nd Trial ☐☐☐☐☐☐ = ____ steps

Corrects Steps	0	1-3	4	5	6
Points	0	1	2	3	4

Sub-test 3 was composed, also, for two items. These had evaluated the ability for the necessary sequence of movements and its simultaneous coordination of the two sides of the body. In the first item, the individual would have to beat the feet at the same time, while he made circles with the fingers. Thus, without interrupting the movement of fingers, the executants would have to complete 10 strokes with the feet in a maximum time of 90 seconds.

The punctuation criterion was simple. In imperfection case, it was pointed with 0 (zero) e, in rightness case, was pointed with 1 (one). The individual could recommence all time that wanted. The important was not to exceed the 90 seconds.

The appraiser remained executing the movement during all the available time for this test of form to stimulate the continuity of the movement for the child.

In the second item, the individual would jump highest how much he could and would have to beat the biggest number of palms to the front of the face. It was written down the number of palms and, the more carried through, better the performance in the test. It was registered the best performance in two attempts. The punctuation if carried through as it sees below in Table 4.

Table 4 Punctuation of item 2 of Sub-test 3

Sub-test 3 – Item 2

1ª Trial _____ claps 2ª Trial _____ claps

Number of claps	0	1	2	3	4	Above 4
Punctuation	0	1	2	3	4	5

The main intention of the use of this test was not to classification the individuals inside of standards or international levels of motor ability, but to have it as reference for descriptive evaluation of the current situation of motor performance of the evaluated children.

Statistic treatment

It was used for analysis of the data descriptive statistics: average, standard deviation, so that the comparison between the data could be made.

RESULTS

was discussed and compared the results of the motor proficiency test, in the reduced form of the protocol of Bruininks-Oseretsky (1975) that it evaluated the performance of the ample motor abilities and of the balance in 28 girls of seven years practicing of Olympic Gymnastics and of the Curricular Physical Education of the City of Rio de Janeiro.

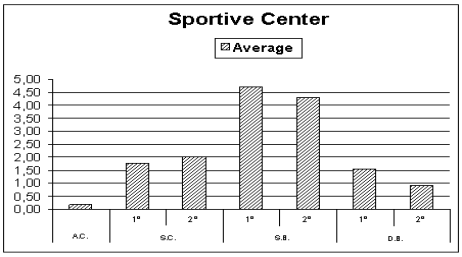


Figure 1: Average punctuation gotten in the different tests for the children of the Sporting Center Legend: A.C. - Ample coordination (Bilateral) S.C. - Coordination with jump S.T. - Static balance D.B. - Dynamic Balance

In figure 1, it is observed that, the children of the Porting Center, in the same one we quantify its averages being possible to observe that its values had not been raised in relation to the maximum punctuation.

In figure 2 it is showed the averages gotten for the group of girls who only practiced Curricular Physical Education. It also verified that the averages not high.

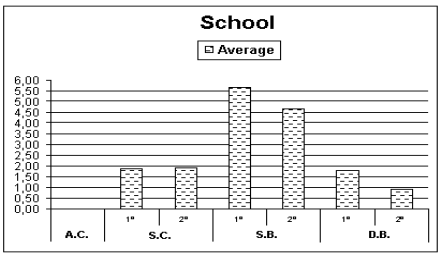


Figure 2: Average punctuation gotten in the different tests for the children of the School

Legend: A.C. - Ample coordination (Bilateral) S.C. - Coordination with jump S.T. - Static balance D.B. - Dynamic Balance

In figure 3 it can be observed the comparisons between the averages gotten for the girls of the Sportive Center in relation ace of the Municipal School. The girls of the Sportive Center had gotten lesser averages that of the College in the balance tests, already in the coordination tests the values had been inverse.

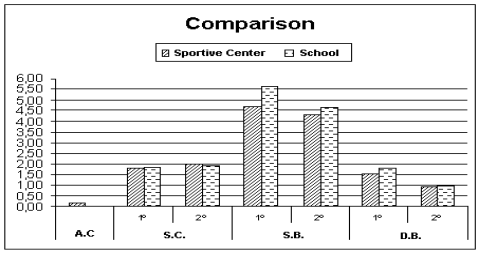


Figure 3: Average punctuation gotten in the different tests for the children of the School and of the Sporting Center:
Legend: A.C. - Ample coordination (Bilateral) S.C. - Coordination with jump S.T. - Static balance D.B. - Dynamic Balance

The girls of the Sportive Center had presented in the tests of motor coordination average greater that the girls of the Municipal School. Already in the balance tests the averages biggest had been of the girls of the College in relation to the ones of the Porting Center. This sample that despite the Olympic Gymnastics being an activity where she becomes necessary motor coordination and balance, the evaluated girls can not have these well worked abilities in its training.

CONCLUSION

This study had the objective to verify if it had an improvement in the adaptive answers of the motor coordination and the balance in practicing girls of Olympic Gymnastics and of the practice of the Curricular Physical Education in girls of 7 years of the City of Rio de Janeiro.

In accordance with the averages gotten through the applied test, were possible to observe that the practicing girls of Olympic Gymnastics had presented resulted in the motor tests above of the non attend girls in relation to the motor coordination.

Verifying the averages of the balance test, we observe that the pertaining to schoolgirls had gotten bigger averages of the one than the practitioners of Olympic Gymnastics. Through these data we could conclude that the activity of Olympic Gymnastics did not represent differences in the adaptive answers of the motor coordination and the balance in girls of seven years of this study. However variable exist that had not been possible to be controlled, as for example, the training; the activities of leisure of the children; the feeding; familiar habits among others. With this the author recommends that more controlled more changeable research can be made about the subject and so that if it can establish a bigger level of trustworthiness.

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ADAPTATIVe ANSWERS Of inCURRed MOTOR COORDINATION And the BALANCE Of the PRACTICe OF olimpic GYMNASTICS And PRACTICe Of The CURRICULAR PHYSICAL EDUCATION IN 7 YEARS old GIRLS OF The CITY Of Rio De Janeiro

Summary: In the past years the society has increased the search for the practice of physical activities aiming at the improvement in the quality of life, esthetic and the socialization among others objective. Since the Olympic Gymnastics is considered one of the oldest and most popular modality in sports of the Olympic program, and being the modality that generated more expectations in 2004 in Brazilian community due to the great variety of artistic movements, dynamic and static, of difficulty constituted by the coordination of extremely seductive plastic beauty. This activity shows in its base formation natural movements, gradually adaptable to the conditions of the athletes, what probably generates improvements in

the motor coordination and the balance just by practicing it. The objective of this research was to identify if there was an improvement in the adaptive answers of motor coordination and the incurred balance on the practice of Olympic Gymnastics and the practice of the discipline of Physical Education in 7 years old girls of the City of Rio de Janeiro. A total of twenty-eight girls with the age of seven years old were evaluated, fourteen of the 28 were from the sports center, some were athletes of Olympic Gymnastics and the other fourteen from a City College, both located in the West Zone of the City of Rio de Janeiro. To evaluate the girls in question the reduced test of coordination of Bruininks-Oseretsky (1974) of motor proficiency was used, with the purpose to evaluate the performance of the motor abilities and the balance. Even though the girls from the Sports Center presented a bigger average on the tests of coordination than the girls from the College, these differences wasn't significant statistically. This shows that the Olympic Gymnastics besides being an activity where there is the necessity of motor coordination and balance, the evaluated girls may not have had in an optimized way worked the psychomotor structures in their practices. Along with this information we could conclude that the activity of Olympic Gymnastics does not present differences in the adaptable answers of the motor coordination and the balance in girls of seven years old in this study. However there were variables that had not been controlled, as for example, the practices; the children leisure activities; the feeding; family habits and among others. This study recommends that more researches could be done about and more controlled variables so that it can be established a higher level of reliability.

Key-Words: Motor coordination, balance and Olympic Gymnastics.

RÉPONSES ADAPTATIVES DE LA COORDINATION ENCOURUE DE MOTEUR ET DE L'ÉQUILIBRE DE LA PRATIQUE DE LA GYMNASTIQUE D'OLIMPIC ET DE LA PRATIQUE DE L'ÉDUCATION PHYSIQUE CURRICULAIRE EN 7 ANS FILLES DE LA VILLE DE RIO DE JANEIRO

Sommaire : En dernières années la société a augmenté la recherche pour la pratique des activités physiques visant l'amélioration de la qualité de la vie, esthétique et la socialisation entre d'autres objectives. Puisque la gymnastique olympique est considérée une de la modalité la plus ancienne et la plus populaire dans les sports du programme olympique, et d'être la modalité qui a produit de plus d'espérances en 2004 dans la communauté brésilienne due à la grande variété de mouvements artistiques, dynamique et statique, de la difficulté constituée par la coordination de la beauté en plastique extrêmement séduisant. Cette activité montre dans ses mouvements normaux de formation basse, graduellement adaptables aux conditions des athlètes, ce qui produit probablement des améliorations de la coordination de moteur et de l'équilibre juste en le pratiquant. L'objectif de cette recherche était d'identifier s'il y avait une amélioration des réponses adaptatives de la coordination de moteur et de l'équilibre encouru sur la pratique de la gymnastique olympique et la pratique de la discipline de l'éducation physique en 7 ans de filles de la ville du Rio de Janeiro. Un total de vingt-huit filles avec l'âge de sept ans de ont été évalués, quatorze des 28 étaient du centre de sports, certains étaient des athlètes de la gymnastique olympique et l'autre quatorze d'une université de ville, toutes les deux a placé dans la zone occidentale de la ville de Rio de Janeiro. Pour évaluer les filles en question l'essai réduit de la coordination de Bruininks-Oseretsky (1974) de compétence de moteur a été employé, avec le but d'évaluer l'exécution des capacités de moteur et de l'équilibre. Quoique les filles du centre de sports aient présenté une plus grande moyenne sur les essais de la coordination que les filles de l'université, ces différences n'étaient pas significatives statistiquement. Ceci prouve que la gymnastique olympique sans compter qu'être une activité où il y a la nécessité de la coordination et de l'équilibre de moteur, les filles évaluées a pu ne pas avoir eu dans une manière optimisée a travaillé les structures psychomotrices dans leurs pratiques. Avec cette information nous pourrions conclure que l'activité de la gymnastique olympique ne présente pas des différences dans les réponses adaptables de la coordination de moteur et de l'équilibre dans les filles de sept ans de en cela étude. Toutefois il y avait des variables qui n'avaient pas été commandées, en tant que par exemple, les pratiques ; les activités de loisirs d'enfants ; l'alimentation ; habitudes de famille et entre d'autres. Cette étude recommande que plus recherche pourrait être fait des variables environ et plus commandées de sorte qu'il puisse établir un niveau plus élevé de fiabilité.

Mots-clés : Coordination de moteur, équilibre et gymnastique olympique.

RESPUESTAS ADAPTATIVAS DE LA COORDENACIÓN MOTORA Y DEL EQUILÍBRIO RESULTANTE DE LA PRÁCTICA DE LA GIMNÁSTICA OLÍMPICA Y DE LA PRÁCTICA DE LA EDUCACIÓN FÍSICA CURRICULAR EN MUCHACHAS DE 7 AÑOS DEL MUNICÍPIO DE RIO DE JANEIRO

Resumen

En los últimos tiempos la sociedad ha aumentado en búsqueda por la practica de actividades físicas enfocando-se en mejorar la cualidad de vida, estética, y socialización entre otros objetivos. Siendo la Gimnástica Olímpica una de las modalidades deportivas mas antigua y populares del programa olímpico, y también considerada la modalidad que generó más expectativas en la población Brasileña en 2004 debido a una gran variedad de movimientos artísticos, dinámicos y estáticos, de difícil coordinación constituida de belleza plástica extremadamente seductora. Esta actividad presenta en su base de formación movimientos naturales adaptables gradativamente a las condiciones de las practicantes, lo que probablemente genera mejoras en la coordinación motora y del equilibrio solamente a través de la práctica. El objetivo de este trabajo fue identificar se había una mejora en la respuestas que son adaptables a la coordinación motora y del equilibrio resultante a la práctica de la Gimnástica Olímpica y de la práctica de Educación Física curricular en muchachas de 7 años del Municipio de Rio de Janeiro. Fueron evaluadas en total vinte y ocho muchachas con edades de siete anos, cuatorze de estas son del Centro Deportivo, las practicantes de Gimnástica Olímpica y las cuatorze que restan son de un Colegio Municipal, ambos localizados en la Zona Oeste del Municipio de Rio de Janeiro. Para evaluar las personas cuestionadas fue utilizado un test de coordinación reducido de Bruininks-Oseretsky (1974) de preeficiencia motora, con la finalidad de evaluar el desempeño de amplas habilidades motoras y del equilibrio. Aún que las muchachas del Centro Deportivo presentaron mayores promedios en los tests de coordinación de que las muchachas del colegio, estas diferencias no fueron estadísticamente significativas. Esto nos muestra, aún que, la gimnástica olímpica sea una actividad en donde es necesario la coordinación motora y equilibrio, las muchachas evaluadas pueden no haber tenido de forma optimizada el trabajo de las estructuras psicomotoras evaluadas en su entrenamiento. A través de estos datos se puede concluir que la actividad de la gimnástica olímpica no muestra diferencias en las respuestas que se adaptan en la coordinación motora y del equilibrio en muchachas de siete años en esta investigación. Con todo esto, existen variables que no fueron controladas, como por ejemplo, los entrenamientos; las actividades de pasatiempo de los niños; la alimentación; los hábitos familiares entre otros. Con esto, recomienda-se a partir de este estudio que mas pesquisas puedan ser hechas a cerca del asunto y más variables controladas para que se pueda establecer un nivel mayor de confiabilidad.

Palabras-claves: Coordinación motora, equilibrio y Gimnástica Olímpica.

RESPOSTAS ADAPTATIVAS DA COORDENAÇÃO MOTORA E DO EQUILÍBRIO EM MENINAS DE 7 ANOS DECORRENTES DA PRÁTICA DE GINÁSTICA OLÍMPICA E DA PRÁTICA DA EDUCAÇÃO FÍSICA CURRICULAR NO MUNICÍPIO DO RIO DE JANEIRO

Resumo:

Sendo a Ginástica Olímpica uma das modalidades esportivas mais antigas e populares do programa olímpico, tendo sido nas olimpíadas de 2004, uma das modalidades que mais gerou expectativas na população brasileira devido a

grande variedade de movimentos artísticos, dinâmicos e estáticos, de difícil coordenação constituída de beleza plástica extremamente sedutora. Apresenta em sua formação de base movimentos naturais, gradativamente adaptáveis às condições das praticantes, que provavelmente gera melhoras na coordenação motora só pela prática. **Objetivo:** identificar se havia melhora nas respostas adaptativas da coordenação motora e equilíbrio decorrentes da prática de Ginástica Olímpica e da prática da Educação Física Curricular em meninas de 7 anos do Município do Rio de Janeiro. **Método:** Foram avaliadas um total de vinte e oito meninas, na faixa etária de sete anos, sendo destas quatorze do Centro Desportivo, praticantes de Ginástica Olímpica e as demais freqüentadoras de Colégio Municipal, ambos localizados na Zona Oeste do Município do Rio de Janeiro. Para avaliar os sujeitos em questão foi utilizado o sub-teste de coordenação extraído da forma reduzida do protocolo de Bruininks-Oseretsky (1974) de proficiência motora, com a finalidade de avaliar o desempenho das habilidades motoras ampla e do equilíbrio. **Resultados**: Foi utilizado para análise dos resultados, estatística descritiva, média e desvio-padrão, valor máximo e mínimo. **Conclusão**: Nos testes de coordenação as meninas do Centro Desportivo obtiveram médias maiores do que as meninas do Colégio, essas diferenças não pareceram ser significativas. Tal resultado denota que para o grupo estudado, apesar da Ginástica Olímpica ser uma atividade onde se faz necessária coordenação motora e equilíbrio, as avaliadas podem não ter tido de forma otimizada o trabalho das estruturas psicomotoras avaliadas nos seus treinos. Através desses dados poderíamos supor que a atividade de Ginástica Olímpica neste grupo não gerou mudanças nas respostas adaptativas tanto na coordenação motora quanto no equilíbrio. Contudo existem variáveis que não foram controladas, como por exemplo, os treinos; as atividades de lazer das crianças; a alimentação; hábitos familiares entre outros.

Palavras - Chave: Coordenação Motora, Equilíbrio, Ginástica Olímpica.