

98 - THE EFFECT OF VOLLEYBALL TRAINING IN MOTOR COORDINATION IN STUDENTS OF A PRIVATE SCHOOL

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INTRODUCTION

An optimized motor development is an indispensable factor for the biological evolution of children and adolescents, and it is important to study the same in the most diverse physical education programs. As a result, the number of researches in this area has been increased in order to obtain information on the physical and motor development and capacity of these individuals (Sá et al., 2014).

Physical education and its application in motor performance are based on the needs of each child. For it is through the movement that the juvenile obtains the maturation of the body, thus aiding in the formation of his corporal scheme, besides the other psychomotor functions involved as: balance, coordination, agility and flexibility (Stelmach, 2014).

Sports practice is attributed to health promotion, increased life expectancy and is directly associated with improved psychomotor performance. Different modalities of physical activity have been relevant in the construction of a healthier life due to the improvement of the motor system (Portal, 2014).

Many studies point out that the healthy lifestyle begins to be built during childhood, relating children with motor activity deficit with predisposition to adult sedentary lifestyle and, consequently, low quality of life index. However, it is believed that with the application of Physical School Education this problem is diminished over the years (Silva, 2015).

Volleyball is an example of a sporting practice that demonstrates a high variety of motor and physical experiences, leading to an increase of skills and efficient movements according to the learning provided (Mutti, 2003).

In this context, in view of the relevance of volleyball training during childhood and adolescence for the improvement of motor development, this work had as main objective to describe the motor development of volleyball students of a private school, correlating the time of training with increased motor capacity.

MATERIALS AND METHODS

Characterizations of the study

This study is a descriptive research of quantitative approach, due to the variables contemplated in the analysis, to be examined according to the objectives presented by the present work, during a programmed period of time (Drews, 2013).

Sample

The population of the present study was destined to 30 students of volleyball of the College Cristo Rei in the city of Patos-PB of the female sex with age group of 10-17 years.

Term of Consent

The project was submitted to the Research Ethics Committee of the Faculdades Integradas de Patos - FIP, formulated in resolution 510/2016, and only after its approval was the research initiated.

Collection procedures

Initially I moved to the Cristo Rei College in the city of Patos PB where the collection began at 2.30 pm and closed at 5 p.m. in the afternoon. The data were collected in volleyball training during physical education classes where the students were invited to participate in the KTK-Körperkoordination Test fur Kinder tests, with inclusion criteria as follows: Elementary school students II and high school of the Christ King College of the city of Patos PB, are in the age group from 10 to 17 years of age, are female, and those responsible signed the term of participation and the informed consent form - TCLE. Regarding the exclusion criteria, students who were not from the institution were excluded and those responsible did not allow undergoing the test. The instrument used for the data collection was the KTK-Körperkoordination Test fur Kinder test where strength, laterality, balance and speed were worked.

Used tools

For the evaluation of children's motor development, the best method described in the literature was the battery of KTK tests (Carminato, 2010). This test is primarily aimed at examining the motor function of children as they age. The analysis of this method is through the observation of four motor skills such as laterality, strength, balance and agility.

Task 1 - Balance Beam

Purpose: Balance stability in reverse gear on the beam.

Material: Three beams 3 meters long and 3 cm high, with widths of 6cm, 4.5cm and 3cm.

Task 02 - Monopedal Jump

Objective: Coordination of the lower limbs; dynamic energy / force.

Material: 12 foam blocks are used, each measuring 50 x 20 x 5cm.

Task 03 - Legs - SL

Objective: Speed in alternating jumps.

Material: A wooden platform (plywood) of 60 x 50 x 0.8cm, with a dividing batten of 60 x 4 x 2 cm and a Stopwatch.

Task 04 - Transfer over platforms -TP

Objective: laterality; spatio-temporal structuring.

Material: One timer and two wooden decks with 25 x 25 x 38

1.5 cm and in the corners of which are bolted four feet 3.5 feet high.

RESULTS AND DISCUSSION

The results were obtained from the analysis of the KTK test in 30 girls practicing volleyball at the Cristo Rei College in the city of Patos-PB, elementary and middle school, aged 10-17 years, all female.

The KTK test examines the corporal motor coordination, through the following parameters: balance, laterality, speed and agility. These parameters are used to define the evaluative classification of the test in: optimal coordination, good coordination, normal coordination, deficiency in coordination and insufficient coordination. As shown in table 1.

Table 1: Classification of the Body Coordination test (KTK test)

CLASSIFICATION	QM (COORDINATION COEFFICIENT)
Great coordination	131-145
Good coordination	116-130
Normal coordination	86-115
Deficiency in coordination	71-85
Insufficiency in coordination	56-70

Source: CARMINATO, 2010.

Table 2 shows the data obtained from the motor coordination classification of the girls involved in the survey presented in percentage values.

Table 2: Results as a percentage of the survey.

CLASSIFICATION	QUANTITAVE	%
Great coordination	5	16,7%
Good coordination	4	13,33%
Normal coordination	8	26,6%
Deficiency in coordination	3	10%
Insufficiency in coordination	10	33,3%

In the data obtained in this research, we observed that 16.7% of the students had an excellent coordination and that they were within the age range of 15 to 17 years. This result corroborates the research by Saker et al. (2012), which showed that girls between the ages of 15 and 17 had higher motor skills than students aged 6 to 14 years. Evidently, as the girls' age increased, the mean values of the KTK test also increased. Other authors also agreed with these data, relating this good performance to the growth phases. As the study by Aburachid et al. (2015), by which showed that period 15-17 years women had an evolution of levels of motor capacity performance. Emphasizing that at the end of childhood and at puberty these capacities to be stimulated and worked could reach their maximum utilization.

Other important results presented in table 2, were the quantitative of the individuals who participated in the research and who were classified with insufficient coordination, being 10 students totaling a percentage of 33.3% in the age range of 10 to 12 years. Demonstrating that this index is due to the lack of practice of physical activities that work with the motor development of these children and a shorter time of physical training. As also, it was presented in the research conducted by Pelozin and collaborators (2009), who performed an analysis with children from 9 to 11 years old divided into two groups: physical activity practitioners (such as volleyball, soccer and basketball) and non-practitioners. The practicing group showed a better result, ranking most of these students in the good coordination category. Whereas, the non-practicing group was classified in the categories of insufficiency or normal motor coordination.

Regarding the parameters evaluated in the KTK test, in platform transfer all the students regardless of age had similar performances. This situation is explained by Nunes (2011), because it is believed that this task has a greater complexity. Due to requiring multiple capacities of various body elements in relation to other tasks, allied with a certain level of concentration and cognition.

The crucial differences were in the following aspects: in agility, balance and single-leg jump. Where 33.33% of the students presented motor insufficiency or disturbance in these three parameters, where only 13.33% obtained good results. However, only 16.7% stood out during the KTK test due to their superior training time and experience in volleyball. As exposed by Carminato (2010), where children above 14 years of age presented greater agility and strength during the test due to having more frequently experienced physical activities that worked with these parameters than the smaller ones.

CONCLUSION

Based on the results, it was verified that only 16.7% of the girls practicing volleyball obtained an excellent coordination, due to the fact that they had experienced more activities that required more movements, such as volleyball, in physical education classes, offering this motor coordination for this category.

In view of this, the present study evidenced an insufficiency in the motor coordination of the girls involved in the study of the Cristo Rei College in the city of Patos PB, where the largest population (33.3%) of the sample had insufficient motor coordination. This result highlighted the need to practice physical and sports activities, which allow the improvement of the motor coordination development, and consequently the promotion of the quality of life of these children and adolescents.

With this, it can be concluded that this research will stimulate other researchers to deepen in this area, thus contributing to the improvement of the professionals, evidencing the importance of planning the classes of physical education more effective for the motor development of children and adolescents. As well as informing and encouraging the practice of physical activity, such as volleyball, to improve the lifestyle in these phases of life.

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THE EFFECT OF VOLLEYBALL TRAINING IN MOTOR COORDINATION IN STUDENTS OF A PRIVATE SCHOOL

This scientific research had as a general objective to describe the motor development in volleyball practicing students of the Cristo Rei College. It is classified as a descriptive research of quantitative approach, due to its methodology being based on the application of the test battery *Körperkoordination Test für Kinder - KTK*. In this context, this study analyzed the influence of volleyball in the motor development process in 30 students aged 10 to 17 years practicing volleyball of the Cristo Rei College through the battery of KTK tests. Whose data were tabulated T-Student and parsed in Microsoft Office Excel. The result of the sample showed 33.3% of the students with insufficient coordination, 10% of the students had coordination problems, 26.6% of the students with normal coordination, 13.33% with good coordination and only 16.7% with excellent coordination. With this, it was possible to observe that the largest population of the sample had a motor insufficiency due to being at the beginning of sports practice, besides the lack of training and exercises that work with the development of their motor skills. It becomes necessary, the practice of physical and sports activities such as volleyball, that allow the improvement of the motor coordination, and consequently the promotion of the quality of life of these children.

Keywords: Motor development. Volleyball. Battery of tests KTK.

EFFET DE LA FORMATION DE VOLLEYBALL SUR LA COORDINATION DES MOTEURS CHEZ DES ÉLÈVES D'UNE ÉCOLE PRIVÉE

Cette recherche scientifique avait pour objectif général de décrire le développement moteur des étudiants en pratique de volley-ball du Christ King College. Il s'agit d'une recherche descriptive d'approche quantitative, en raison de sa méthodologie reposant sur l'application de la batterie de tests *Körperkoordination Test für Kinder - KTK*. Dans ce contexte, cette étude a analysé l'influence du volleyball dans le processus de développement moteur de 30 étudiants âgés de 10 à 17 ans pratiquant le volleyball du Cristo Rei College grâce à la batterie de tests KTK. Dont les données ont été compilées T-Student et analysées dans Microsoft Office Excel. Le résultat de l'échantillon montre que 33,3% des étudiants ont une coordination insuffisante, 10% des étudiants ont des problèmes de coordination, 26,6% des étudiants ont une coordination normale, 13,33% ont une bonne coordination et seulement 16,7% ont une excellente coordination. Cela a permis d'observer que la plus grande population de l'échantillon présentait une insuffisance motrice du fait qu'elle était au début de la pratique sportive, en plus du manque d'entraînement et d'exercices qui contribuent au développement de la motricité. Il devient nécessaire de pratiquer des activités physiques et sportives telles que le volley-ball, qui permettent d'améliorer la coordination motrice et, partant, de promouvoir la qualité de vie de ces enfants.

Mots-clés: Développement moteur. Volleyball. Batterie de test KTK.

EL EFECTO DEL ENTRENAMIENTO DE VOLEIBOL EN LA COORDINACIÓN MOTOR EN ESTUDIANTES DE UNA ESCUELA PRIVADA

Esta investigación científica tuvo como objetivo general describir el desarrollo motor en alumnas practicantes de voleibol del Colegio Cristo Rey. Clasificándose como una investigación descriptiva de abordaje cuantitativo, debido a su metodología ser basada en la aplicación de la batería de prueba *Körperkoordination Test für Kinder - KTK*. En este contexto, este estudio analizó la influencia del voleibol en el proceso de desarrollo motor, en 30 alumnas con edades entre 10 y 17 años practicantes de voleibol del Colegio Cristo Rey a través de la batería de pruebas KTK. Cuyo, los datos fueron tabulados T-Student y analizados en Microsoft Office Excel. El resultado de la muestra presentó el 33,3% de las alumnas con insuficiencia en la coordinación, el 10% de las alumnas perturbación en la coordinación, el 26,6% de las alumnas con coordinación normal, el 13,33% con buena coordinación y sólo el 16,7% con óptima coordinación. Con ello, fue posible observar que la mayor población de la muestra presentó una insuficiencia motora debido a que se encuentran al inicio de la práctica deportiva además de la falta de entrenamientos y de ejercicios que trabajen con el desarrollo de sus habilidades motoras. Se hace necesaria la práctica de actividades físicas y deportivas como el voleibol, que posibiliten la mejora de la coordinación motora, y consecuentemente la promoción de la calidad de vida de estos niños.

Palabras clave: Desarrollo del motor. Voleibol. Batería de prueba KTK.

O EFEITO DO TREINAMENTO DE VOLEIBOL NA COORDENAÇÃO MOTORA EM ESTUDANTES DE UMA ESCOLA PRIVADA

Esta pesquisa científica teve como objetivo geral descrever o desenvolvimento motor em alunas praticantes de voleibol do Colégio Cristo Rei. Classificando-se como uma pesquisa descritiva de abordagem quantitativa, devido a sua metodologia ser baseada na aplicação da bateria de teste *Körperkoordination Test für Kinder - KTK*. Nesse contexto, este estudo analisou a influência do voleibol no processo de desenvolvimento motor, em 30 alunas com idades entre 10 e 17 anos praticantes de voleibol do Colégio Cristo Rei através da bateria de testes KTK. Cujo, os dados foram tabulados T-Student e analisados no Microsoft Office Excel. O resultado da amostra apresentou 33,3% das alunas com insuficiência na coordenação, 10% das alunas perturbação na coordenação, 26,6% das alunas com coordenação normal, 13,33% com boa coordenação e apenas 16,7% com ótima coordenação. Com isso, foi possível observar que a maior população da amostra apresentou uma insuficiência motora devido se encontrarem no início da prática esportiva além da falta de treinos e de exercícios que trabalhem com o desenvolvimento de suas habilidades motoras. Tornando-se necessária, a prática de atividades físicas e esportiva como o voleibol, que possibilitem a melhora da coordenação motora, e consequentemente a promoção da qualidade de vida destas crianças.

Palavras-chave: Desenvolvimento Motor. Voleibol. Bateria de testes KTK.