92 - EVALUATION OF THE IMPORTANCE OF MOTOR PATTERNS RELATED TO THE CONVERSION OF FOUL SHOTS IN BASKETBALL GAME.

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INTRODUCTION

Athletic and sportive movements structurally depend on a vast of physiological and neuromotor factors that generate functionality and define the level of performance of an individual can do in a determined motor task. In general, the objective of training linked to several sports practices is directed to improve the function of these organic factors, with the aim in give to the athlete the best possible level in each variant component of his biodynamic of action, referred to it field of competition (FONSECA, 2008, CARDOSO, 2007, SILVA, 2004).

In basketball game exists two technical skills that can be executed with technically perfection to have a better chance of win a game, that's means a chance close to 70%. These two technical skills are defense and foul shots conversion (HODWAR 2006).

In the last years many changes occurred in the practice of basketball game, were increased the speedy of the game, were made many rules modifications, making of basketball one of the more fasten sports of the planet in terms of individual and collective performance. The best tactical scheme starts from a strategy of aggressive defense that brought as consequence the increasing number of fouls in the whole game, which originated the foul shots. This technical skill use to be easy in being executed, and in fact it is if the player can dominate the technique and added to his self motivation make him capable to do the motor act with a proficiency that's can make the difference in the score of the game as positive result (HODWAR 2006)

To execute a motor skill it's required that the Central Nervous System controls space, temporal and quantitative characteristics, transforming and abstract intention into a muscular activity adapted for the situation required.

When a player interprets a game situation produce an intention that activates functionally centers like the brain associative cortex, frontal and parietal, the structures in the base of cerebellum and the motor nucleus which will activate muscular groups required to make the adapted gesture, transferring to the player the task of body control in variable and adaptable way, involving general and specific motor programs, comparing mechanisms, error and referential detection (SILVA et al 2008)

Those mechanisms of comparing make a neuro motor complex process linked to a motor task of free fault shots in the basketball game, which initiates by the correct way in holding the ball. The correct hold is with both thumbs of hand fingers in a “T” shape with one of the hands giving support to the ball, the other as the launching hand, taking care also with the correct angle of the launching arm which should be above the head in the moment of shooting the ball to the basket. The player also must to observe the complete wrist flick of the shooting hand in the moment when the ball is leaving the hand, applying in this way a contrary spin to the ball, which will increase the precision to convert the foul shot, to accomplish the task in convert the foul shot is necessary an integration between the special perception, the eye motor control and body consciousness to elaborate a mental plan by the player to movement execution (DANCKERT, SAOUD E MARUFF, 2004).

According with Goldstein (2002) the difference between victory and defeat in the basketball game should be determined by the performance in foul shots conversion, because this sport has a high corporal contact having as consequence a high number of foul shots in the whole game. Before the forth collective foul every foul out of the shooting act will be penalized with foul shots.

Taking in place the comments above, this study had the objective to evaluate the importance of motor patterns which make part of the technical skill of foul shooting in female basketball players and its influence in the results to improve its proficiency of conversion.

METHODOLOGY

Typology of Study

In this study was used the context evaluation method, that allows to define the environment meaning concerned in a phenomena, describing the desire real conditions related to it, identifying necessities that were not supplied, also opportunities that were not used, having as finality to give a logical fundament to determine their objectives (STUFFLEBEAM, 1977).

Universe

The universe of this study was composed by 10 basketball players form Santarém City in Pará State, with ages between 18 to 25 years old, that formed a cense group according with the Sample Theory formulated by Cochram (1956).

Study Ethicals

The project of this study was submitted to the Ethical Research Involving Human Beings Committee from Castelo Branco University of Rio de Janeiro, Brazil (UCB/RJ) and approved by the protocol number 161/2008.

Data collection were made in accordance the 196/96 resolution from National Counsel of Health from the Health Federal Department of Brazil. Then, initially was solicited an authorization of participants of this project to be developed, that was made by a Free and Explanation Consent Term.

Evaluation Procedures

To fulfill the objective of this study were used two instruments: first one was the Fundamental Motor Pattern Test for Foul Shots in Basketball Game, adapted by Marcus Hodwar (2006). Using it was evaluated the following specialized skills, of this kind of shot: ball holding, elbows flick, legs flick, elbow extension, leg extension, high look, and wrist flick. Foe each item the players should reach a minimum score of 1 point and maxim of 3 points, making a total of 21 points if all skills obtained maximum qualification.

For the application of too both tests was used an official basketball court, with measures according with the International Federation of Basketball (FIBA), having also official board, basket and supports and basket ring high 3,05 meters above the court floor, and the key of the court measuring 3,66 meters wide by 5,99 meters long, with a distance of 5,8 meters from the end line to the foul line, the court used was the same that players use to have their daily trainings.

Presentation and Results discussing

In table No. 1 are total results of each player related to the motor pattern and the number of foul shots conversion in tem attempts of conversion. In this test the maximum score obtained was 6 points; just one of the players had a performance over 50% of proficiency.

Related to the motor pattern was a variation of results from 0 to 18 points, and again just one player had a performance over 50%, this shows a possible relation between the motor pattern in tasks related with the foul shot, and the proficiency of inside foul shots.

Inside Shots	Ball holding	Elbows flick	Legs flick	Elbows extension	Legs extension	High look	Wrist flick	Motor pattern
0	0	0	0	0	0	0	0	0.0
1	0	0	0	1	1	0	0	2.0
2	0	0	1	1	2	0	0	4.0
4	1	1	2	1	1	1	1	8.0
1	0	0	0	1	1	0	0	2.0
1	0	0	0	1	1	0	0	2.0
3	1	1	1	1	1	0	1	6.0
6	3	2	3	2	3	3	2	18.0
3	1	1	1	1	1	1	0	6.0
3	1	1	1	1	1	1	0	6.0

Table 1 Inside shots in 10 attempts X motor pattern

The relation between the Motor Pattern and the Number of Foul Shots Inside were obtained by the application of Linear Correlation of Pearson. The statistic test presented as a result the Correlation Coefficient, r = 0.9649 (figure 1), through this test also can affirm that the movement pattern which influenced more the foul shots inside was legs flick (r = 0.9686), following by elbows flick (r= 0.9482) and ball holding (r = 0.9362). The motor pattern that has less influence on the foul shots inside were legs extension (r = 0.7295).

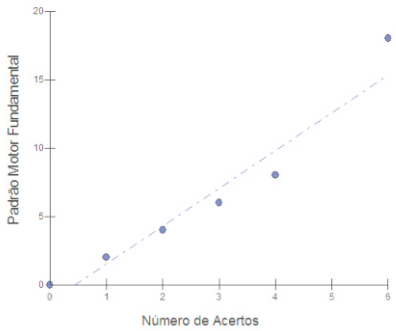

Figure 1: Correspondence between Motor Pattern and the Number of Inside shots, n=10, p-valor <0.001*, r = 0.9649.

From data showed above, and considering that the development of coordinative capacities straight depends on motor patterns, we can say the essential coordinative capacities related to foul shots execution will depend too. For technical domain of this motor act, the coordinative capacities this means: global coordination, fine coordination, meanly hand-eye coordination, will determinate the proficiency of foul shots inside. Then motor pattern constitute a piece of the fundamental motor pattern (which posses all motor patterns described) of the motor act of shooting the ball to de basket.

In this way should be believed that the fundamental pattern of foul shots is constructed by the development of fundamental motor patterns like: ball holding, elbows flick, elbows extension, legs flick, legs extension, high look and wrist flick, will sustain the develop of stabilization and manipulative abilities that could be progressive refined and combined to get to the excellence of the fundamental motor pattern of fouls shooting inside in basketball game.

Ending data discussion, we can considered that main factors that determine the performance of a foul shot, are the same that determine the trajectory of a projectile fly, highness, velocity, and angle of delivery, also air resistance against the ball. The effective functionality of the basketball player processor system of information, jointed with a detailed understanding about the structural and functional nature of this system is certainly a unique condition to improve the performance of foul shooting in basketball game.

CONCLUSION

According to the results finding in this search, we can affirm that complete formation of motor patterns which constitute the fundamental pattern of the motor gesture of foul shoots in basketball game, has an straight interference in the proficiency of the performance related to foul shots inside the basket, making evident the increasing of balls inside the basket becoming from a foul shot will be depend of a learning motor process for each motor pattern of movement. Therefore, a foul shot with 100% of proficiency is one that obtains the maximum score in all motor patterns together, described on the test, that's means 21 points. The player who got closest of this performance obtained 14 points, with 60% of proficiency.

Could be a contínuos improving of fundamental motor pattern of foul shot in those female basketball players if crated a neuromotor program training that could be efective in learning performance and automation of basic motor patterns, increasing in this way the proficiency of foul shots related to balls inside.

Then, we can conclude that for the essence of a collective game like basketball, the roll of the Central Nervous System in sportive training can not be in a second place, if coaches has not objectives an specific training of players motricity could be lost a potential gain players organic conditions that could make the difference in a good motor act performance.

At least, we can consider that action biodynamic of an individual depends of the performance of his neural organism and its influences in mental processing with organization, affectivity and body control related to the action ambience, those factors could be improved by an adequate motricity training which could make the difference as an athlete. In this way, motricity training has critical benefits to muscle performance when activated and organized in it coordinative structures, normal training, made in regular bases, which has more general factors doesn't reach these gains.

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EVALUATION OF THE IMPORTANCE OF MOTOR PATTERNS RELATED TO THE CONVERSION OF FOUL SHOTS IN BASKETBALL GAME.

ABSTRACT

The present study is an evaluation on the proficiency of the number of converted balls of foul shots and it relationship between the fundamental motor patterns of it of ten females players of the team which represents the municipality o Santarém in Pará State at the age of 18 to 25 years old. The sample was made by a census group, in which was examined the possible relationship between the motor patterns that makes part of fundamental motor pattern of the motor gesture of free shots and the proficiency of the shot knew by the numbers of converted balls of each player. The tests that have been used were the evaluation protocol of the fundamental motor pattern of foul shot that were developed by Marcus Hodwar (2006) showed an interaction between the proficiency of the foul shot in each player with the entire motor pattern that compounds the fundamental motor pattern in basketball free shots.

KEYWORDS: Motor pattern, Basketball, fault shot.

ÈVALUATION DE L´INFLUENCE DU SCHÉMA MOTEUR DE JOUEURS DE BASKET-BALL SUR LE TERRAIN DNAS LA CONVESRSION DE LANCER FRANC

RESUME

Cette étude était basée sur une évaluation de la compétence des emplacements de frapper lancers francs de la valeur par défaut des principaux moteurs de ce geste dans 10 athlètes féminins de l'équipe de basket-ball dans la ville de Santarem, PA, âgés entre 18 et 25. L'évaluation a été faite sur un groupe de recensement, l'examen de la relation possible entre l'évolution des schémas moteurs essentiels au lancer franc de tir et les compétences traduit par le taux de succès de la même, chaque athlète. Les tests ont été le protocole d'évaluation du schéma moteur du lancer franc de basket-ball en hodw validée par Marcus Hodwar (2006) et le taux de réussite moyen unique lancer franc sur dix tentatives. qui n'a présenté aucune interaction et de dépendance entre le niveau de compétence de la hauteur et l'exécution correcte des schémas moteurs qui intègrent la structure fondamentale de la marche du lancer franc de tir.

MOTS-CLÉS: Basketball, lancer franc, modèle moteur fundamental.

EVALUACIÓN DE LA INFLUENCIA DEL PADRÓN MOTOR DE JUGADORAS DE BASQUETBOL SOBRE LA CONVERSIÓN DE TIROS LIBRES

RESUMEN

El presente estudio se trata de una evaluación de la efectividad de conversión de tiros libres en relación al padrón motor fundamental de este gesto motor en 10 jugadoras de la Selección Femenina de básquetbol de la ciudad de Santarém, Estado de Pará con edades comprendidas entre 18 y 25 años. La evaluación fue efectuada en un grupo de censo, examinando la posible relación entre el desenvolvimiento de los padrones motores esenciales para le tiro libre y su efectividad en relación a la conversión del mismo en cada jugadora. Los tests utilizados fueron: el protocolo de evaluación del padrón motor fundamental del tiro libre en el básquetbol, validado por Marcus Hodwar (2006) y el promedio de conversión del tiro libre en 10 intentos, que revelaron haber una interdependencia entre la efectividad en la conversión del tiro libre y la correcta ejecución de los padrones motores que integran el padrón fundamental del tiro libre en el deporte básquetbol.

PALABRAS LLAVES: Básquetbol, tiro libre, padrón motor fundamental.

AVALIAÇÃO DA INFLUENCIA DO PADRÃO MOTOR DE ATLETAS DE BASQUETEBOL SOBRE A CONVERSÃO DO ARREMESSO EM LANCE LIVRE

RESUMO

O presente estudo constituiu-se em uma avaliação da proficiência do acerto de arremessos de lances livres em relação ao padrão motor fundamental desse gesto em 10 atletas da seleção feminina de basquetebol da cidade de Santarém PA, com idades entre 18 e 25 anos. A avaliação se deu em relação a um grupo Censo, examinando a possível relação entre o desenvolvimento dos padrões motores essenciais para o arremesso do lance livre e a proficiência do arremesso traduzida pelo índice de acerto do mesmo, de cada atleta. Os testes utilizados foram o protocolo de avaliação de padrão motor fundamental do arremesso do lance livre no basquetebol validado por Marcus Hodwar (2006) e a média de acerto de lance livre individual em dez tentativas, que revelaram haver interação e uma dependência entre a proficiência do arremesso e a correta execução dos padrões motores que integram o padrão fundamental de movimento do arremesso do lance livre.

PALAVRAS-CHAVES: Basquetebol, lance livre, padrão motor fundamental.

PUBLICAÇÃO NO FIEP BULLETIN ON-LINE: http://www.fiepbulletin.net/80/a1/92