98 - THE INFLUENCE OF MOTOR IMAGERY PERFORMANCE IN THE SERVING IN VOLLEYBALL

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INTRODUCTION

Presently, the players and coaches who work with tennis practice, have noticed and commented on the fact that 80% of playing time are not related to "playing the point", and yes, spending on other factors. Just like tennis, volleyball practice success depends not only on the physical aspects and technical-tactical skills, but also the psychological capacities, and emotional balance and mental strength (SAMULSKI, 2011).

This paper seeks to examine the influence of the practice of a motor imagery program to increase the accuracy of the loot underneath with beginners in volleyball practice.

The use of techniques of motor imagery or mental training, has been widely used by psychologists, coaches and athletes for performance enhancement in sports. The most used technique is the imagination, defined as the systematic process that involves practicing a motor behavior, using the imagination of a specific motor skill, also known as muscle memory (RABBIT, and ELSANGEDY OLIVEIRA, 2008).

Imagination is an experience that mimics the real situation. You can be viewing an image, feeling movements, or even imagining a situation experenciando smell, taste or sound. This can be done with eyes closed, which is different from dreaming, because if you are awake and conscious (BUFALARI et al., 2010).

The sporting performance does not stop just at motor imagery, imagination and visualization. There is a need for the physical practice is highly trained so there is a balance (homeostasis) between body and mind, here using a dualistic terminology, but without ignoring the complexity of the interdependence of the body and brain (Holmes and Mathews, 2001).

Motor tasks and activities that require effort and attention should be practiced for a long time, and to achieve a standard of excellence, Hall (2002) estimates that about ten years of correct practice is required to achieve an exceptional standard of execution.

Volleyball is a very fast and dynamic sport and the athlete's reasoning takes milliseconds to forecast its action, pontando, stay focused during the games is very important. Concentration in high yield often means overcoming unfavorable factors that may be provided to harmful emotional and can not endanger the quality of practice play volleyball.

The motor imagery can be used to prepare the mind to do several things, such as: plan different tactics, physical movements, create and store the sequences of movements effectively and consistently. The motor imagery helps train the person (the brain) to make correct decisions under pressure (ANTUNESet al., 2006).

The motor imagery is very important because it can work the emotional aspects facilitating achieve the proposed objectives and planned. It's a job connected to the conditioning of the mind that thinks so much of the mind that feels it is part of the Psycho-Physical Training Capabilities, mainly used to improve the performance of athletes and is based on the principle that we can exert greater mastery of our thoughts, feelings, and consequently, our motor behavior. The motor imagery helps on many factors, such as gain competitive advantage, increase efficiency and effectiveness of training, develop tolerance mitigating factors during competition as cold, heat, pain, discomfort, fear, among others (BUFALARI et al. 2010).

Consistent, Schachter and Singer (1962) point out that when a person thinks about an act or movement of a body part, there is an increase of EMG recordings (electrical activity), corresponding to the location. Also highlight the relationship between cognitive and motor performance, especially when it comes to tactics and strategies, citing the discovery of the sports skills can be acquired or maintained at the same level using motor imagery. Having seen the above mentioned aspects and the effectiveness of motor imagery in other sports, this study sought to assess the effects of motor imagery on the performance of the drawing underneath novice volleyball players.

MATERIALS AND METHODS

SAMPLE

The sample consisted of 21 young people, who were randomly divided into two groups: an experimental group of 10 young with an average age of 15.8 years (SD = 1.23) and 7 young males and 3 sex and female control group of 11 young with an average age of 16.6 years (SD = 1.22), 8 young males and 3 females.

All subjects practicing volleyball for maximum of 3 months and no tournament experience or formal events.

PROCEDURES

Before the formation of the experimental and control groups was explained to the students the purpose of the research, the procedures in which would be submitted and read and asked for parents or guardians signed the Free and Informed.

Authorized students were subjected to a lottery to determine which group would be part. On the first day of research procedures all young people received a lesson of basic principles and to serve beneath positioning. Then each student was able to make 10 withdrawals in Booty Volleyball test at the State University of North Carolina (BARTLETT et al., 1991 apudGreboggy, 2012) demarcated as the figure 1.

The score was the sum of 10 withdrawals made and can find at least 0 points and the maximum 40. Balls hit out of bounds received 0 points and the balls that landed on the line received the highest score.

The control and experimental groups were for a period of four (4) days without receiving any training grounds or recreational games of volleyball. However, the experimental group received an engraved text on the phone with the program of motor imagery divided into three parts: (1) Relaxation (2) mental practice serve underneath 3rd person (training for self-observation) and 1st person (ideomotor training) and (3) the ending state of relaxation (Samulski, 2002).

The experimental group was instructed to listen to the tape installed on the phone itself once a day, at a time convenient for the student. The researcher monitored daily each member of the experimental group on the conduct of motor imagery.

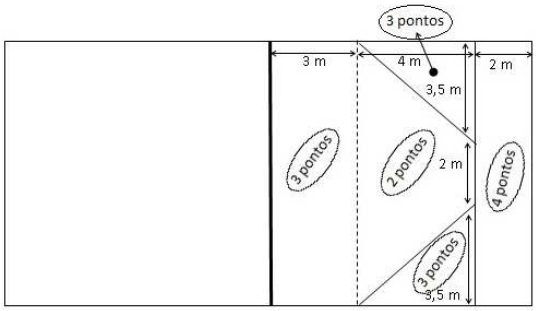


Figure 1 - Organization of the court to test Booty Volleyball State University of North Carolina (BARTLETT et al, 1991 apudGREBOGGY, 2012.).

MATERIAL

The tests were performed on a volleyball court with net and rods in their positions. Moreover, Volleyballs, tape, sheet and pen notes of the results were used.

STATISTICAL ANALYSIS

To conduct statistical software SPSS 22. Using Normality Test Shapiro-Wilk test to verify the distribution of the sample data will be used. Although a small sample was shown the normality of the sample being used and the Student t test. Considered for the significance level of p <0.01 in all calculations.

RESULTS

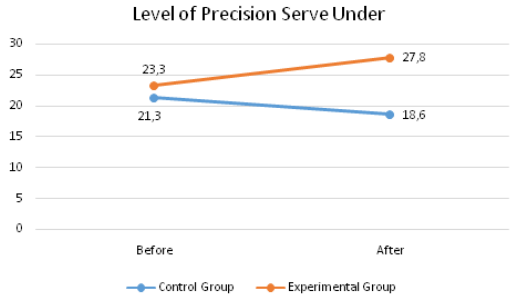
When evaluating the accuracy of the loot beneath the experimental and control groups met the following results presented below (Table 1).

The mean precision of the loot found underneath earlier in the research procedure (pre-test) for the control group was 21.3 (SD = 4.27) and the average found for the experimental group 23.3 (sd = 5.29).

The mean precision of the loot found beneath the end of the research procedure (post-test) for the control group was 18.6 (SD = 3.38) and the average found for the experimental group 27.8 (sd = 3.05).

When comparing the averages of the groups in the pre-test, no significant difference was found. However, to compare the means between groups at posttest difference was found for the significance level of 0.01 (t = 6.529).

When comparing the averages of the control group, the pre-test and post-test a significant difference was found, decreasing the average pretest equals 21.3 points to 18.6 points in the post-test (t = 2.785, p <0.05). Likewise, there was a significant difference (p <0.01) to compare mean pretest to posttest in the experimental group, in this case showed an increase in accuracy of looting by low, increasing from an average of 23, 3 points for an average of 27.8 points (t = -3.479).



Graph 1 - Presentation of the mean level of precision of the groups before and after the program of motor imagery.

DISCUSSION

Statistical comparison between groups at pre-test was important to identify the homogeneity among the subjects who participated in each group being confirmed because there were no significant differences between groups.

Because no person or group had undergone any previous treatment and considered beginners, it was expected that there would be differences in the degree of accuracy between them.

When comparing the mean degree of precision serve beneath the control group, before and after the implementation of the Programme of Motor Imagery in the experimental group, it was found that there was a significant decrease in the degree of accuracy. Possibly the instructions occurring before the pre-test, administered to all subjects in the sample, can be allowed to take a more consistent serve. Perhaps the instructions and steps of movements necessary for the realization of looting were still vivid in memory, allowing for greater precision in the pretest.

Unfortunately, no scientific text which had the aim of investigating the loss of accuracy or other motor skill over time without training this particular skill were found.

A survey that found that, compared with the physical capabilities, eg, cardiovascular, metabolic and maximal oxygen consumption (VO2max) acquired adaptations to physical training "endurance" can be reversed was found, significantly decreasing when the athlete is subjected to a period of physical inactivity of two to four weeks (EVANGELIST and BRUM, 1999).

Something similar may have happened with the control group, because after five days without any kind of training, game or joke related to booty beneath, information and practice related to the pre-test proved inconsistent, because when performing the after-test their performance in these conditions was much lower than the before-test.

Although the control group have shown almost the same performance of the experimental group in the pre-test, the

difference was much different between groups at post-test (p <0.01).

Unlike the control group, the experimental group demonstrated a large improvement between the pre- and post-test. In this case, confirming the effectiveness of the use of motor imagery in increasing the precision of the drawing below. Several experiments demonstrated that the practice of motor imagery is effective for the increase of other physical and emotional skills in healthy individuals or with some physical problem. For example, Montielet al. (2013) found that the motor imagery is effective for improvement in three different drawings game situation.

Figueiraset al. (2012) demonstrated its effectiveness in performance and confidence in football athlete, increasing their chances of finishing for a real football game.

Silva (2011) when working with patients suffering from stroke (cerebrovascular accident) and aiming to identify the acute effect of a program of motor imagery on postural control of their patients and concluded that "in the short term, the program fostered imagination maintaining balance in static posture after stroke "individuals. As Andrade and Wing (2011) concluded that motor imagery "can be considered an additional therapeutic option available for use in patients with specific characteristics."

CONCLUSION

We conclude that motor imagery is effective for increasing the accuracy of the sack beneath beginners persons in volleyball.

Also it was found that the lack of practice under the transfer, for a period of five days after a brief explanation and practice causes the level of precision in drawing under reduced significantly. Hence the importance of ongoing training for the consistent acquisition of motor skills.

REFERENCES

ANDRADE, T. G.; ASA, S.K. P. Prática mental para pacientes com sequelas motoras pós acidente vascular cerebral. Revista de Neurociências. São Paulo, v. 3, n. 19, p. 542-550, 2011.

ANTUNES, H. K. M. et al. Exercício fisico e função cognitive: um revisão. Revista Brasileira de Medicina do Esporte. São Paulo, v. 12, n. 2, 2006.

BUFALARI, I. et al.Motor imagery beyond the joint limits: a transcranial magnetic stimulation study. Biologicalpsychology, v. 85, n. 2, p. 283–90, 2010.

COELHO, R. W.; OLIVEIRA, S. DE; ELSANGEDY, H. M. O efeito da imaginação no desempenhno e na precisão do saque no Tênis de Campo. Revista Brasileira de Cineantropometria& Desempenho Humano, v. 10, n. 2, p. 176–183, 2008.

EVANGELISTA, F. S.; BRUM, P. C. Efeitos do destreinamento físico sobre a performance do atleta: uma revisão das alterações cardiovasculares e músuclo-esqueléticas. Revista Paulista de Educação Física. São Paulo, v. 2, n. 13, p. 239-249, jul./dez., 1999.

FILGUEIRAS, A.et al.O uso da imagética mental como técnica para melhora do aproveitamento no futebol de campo: um estudo de caso. Coleção Pesquisa em Educação Física. São Paulo, v.11, n.4, p. 167-174, 2012.

GREBOGGY, D. de L. O efeito da imaginação na precisão do saque e recepção do voleibol. 2012. 63f. Dissertação (Mestrado em Educação Física). Faculdade de Educação Física. Universidade Federal do Paraná, Curitiba, 2012.

HALL, C. R. Imagery in sport and exercise. In: R. N. Singer; H. A. Hausenblas; C. M. Janelle (Eds.); Handbook of research on sport psychology. 2nd ed., p.529–549, New York: Wiley, 2002.

HOLMES, E. A; MATHEWS, A. Mental imagery in emotion and emotional disorders. Clinical psychology review, São Paulo, v. 30, n. 3, p. 349–62, 2001.

MONTIEL, J. M.et al.Avaliação do treinamento mental namelhora de desempenho do saque no voleibol. Estudos Interdisciplinares em Psicologia. Londrina, v. 4, n. 1, p. 46-63, 2013.

SAMULSKI, D. Psicologia do esporte. Barueri – SP: Editora Manole, 2002.

SAMULSKI, D. Treinamento mental no tênis. Como desenvolver as habilidades mentais. Barueri – SP: EditoraManole, 2011.

SCHACHTER, S. & SINGER, J. E.Cognitive, social and physiological determinants of emotional states.PsychologicalReview, 69, 379-399, 1962.

SILVA, L. R. V. Efeito de um programa de imaginação no controle postural de indivíduos pós acidente vascular cerebral (AVC). [Dissertação de Mestre em Educação Física - Programa de Pós-Graduação em Educação Física, do Setor de Ciências Biológicas]. Universidade Federal do Paraná. Curitiba, 2011.

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THE INFLUENCE OF MOTOR IMAGERY PERFORMANCE IN THE SERVING IN VOLLEYBALL

ABSTRACT

Diverse authors (GODTSFRIEDTet al., 2010;MONTIELetal., 2014) have discussed the relationship between mental preparation and sports performance, and how often the imagination produced, arranged and directed to a particular task can influence the way practical realization of this same task. The objective of this study was to examine whether motor imagery alters the performance of looting beneath young beginners in volleyball practice. To this end, the sample consisted of 21 young people, who were divided into two groups: an experimental group of 10 young with an average age of 15.8 years (SD = 1.23) and control group of 11 young people the average age of 16.6 years (SD = 1.22). For statistical analysis we used SPSS 22 software. The Normality Test denominated Shapiro-Wilk was performed to evaluate the distribution of the sample data and the Student t test to calculate differences intergroups and between groups considered for the significance level of p <0 01. The results showed no significant difference between groups in pre-test demonstrated the technical similarity between the groups. Comparing the two groups before and after the program of motor imagery was found a significant difference in the experimental group showed an increase in the accuracy of the loot underneath, unlike the control group showed a significant decrease in the accuracy of looting by demonstrating that low, probably the lack practicing during the experiment causes the acquired skill does not have enough to be used with the same performance consistency. It was concluded that motor imagery positively influence the accuracy of the loot underneath in young beginner in volleyball.

KEYWORDS: Motor Imagery; Young People; Volleyball.

L'INFLUENCE DE LA PERFORMANCE MOTEUR IMAGES DANS LE SERVICE EN VOLLEYBALL
RÉSUMÉ

Divers auteurs (GODTSFRIEDTet al., 2010;.MONTIELet al., 2014) ontdiscuté de la relation entre la préparation mentale et la performance sportive, et combien de foisl'imagination produit, arrange et dirigéver sunetâche particuliè repeut influencer la façon dont la réalisation pratique de cettemê metâche. L'objectif de cette étude étaitd' examine rsil'imagerie motricemodifie la performance de pillage sous jeunes débutantsdans la pratique de volley-ball. À cette fin, l'échantillonétaitcomposé de 21 jeunes, qui ontétédivisés en deuxgroupes: un groupe expérimental de 10 jeunes avec un âgemoyen de 15,8ans (ÉT = 1,23) et le groupe de contrôle de 11 jeunes, l'âgemoyen 16,6 ans (ÉT = 1,22). Pour l'analysestatistique, nous avonsutilisé le logiciel SPSS 22. Le test de normalitélibellée Shapiro-Wilk a étéréalisée pour évaluer la distribution des données de l'échantillon et le test t de Student pour calculer les différences intergroupes et entre les groupesretenus pour le niveau de signification de p <0 01. Les résultats ont montréaucune différence significative entre les groupes en pré -test démontré la similitude technique entre les groupes. En comparant les deux groupesavant et après le programme de l'imageriemotrice a été constatéune différence significativedans le groupe expérimental a montréune augmentation de la précision du butin en dessous, à la différence du groupetémoin a montréune diminution significative de la précision de pillage en démontrantquefaible, sans doutel'absencepratique de cours de l'expérienceacquiseprovoque la compétencen'a pas assez pour êtreutilisé avec la mêmerégularité des performances. Il a étéconcluquel'imageriemotrice influencer positivementl'exactitude du butindessousdans Jeune débutante dans le volley-ball.

MOTS-CLÉS: imageriemotrice; Les jeunes; Volley-ball.

LA INFLUENCIA DE LA EJECUCIÓN IMÁGENES DEL MOTOR EN LA SAQUE EN VOLEIBOL
RESUMEN

Diversos autores (GODTSFRIEDTet al, 2010;. MONTIELet al, 2014) han examinado larelación entre lapreparación mental y elrendimientodeportivo, y conquéfrecuencialaimaginaciónproducido, arreglado y dirigido a una tareaen particular puede influir enla forma de realizaciónpráctica esta mismatarea. El objetivo de este estudiofue examinar si lasimágenesdel motor altera eldesempeño de lossaqueosdebajojóvenes principiantes enlaprácticadel voleibol. Con este fin, lamuestraestuvo conformada por 21 jóvenes, que fueron divididos en dos grupos: un grupo experimental de 10 jóvenescon una edad media de 15,8 años (DE = 1,23) y el grupo de control de 11 jóvenes de laedad media de 16,6 años (SD = 1,22). Para elanálisis estadístico se utilizóel programa SPSS 22. La prueba de normalidad de Shapiro-Wilkdenominó se realizó para evaluarladistribución de losdatos de lamuestra y laprueba de la t de Student para calcular las diferencias intergrupos y entre grupos considerados para elnivel de significación de p <0 01. Los resultados no mostraron diferencias significativas entre los grupos enelpretestdemostraronlasimilitud técnica entre los grupos. Comparando los dos grupos antes y despuésdel programa de imágenes de motor se encontró una diferencia significativa enel grupo experimental mostraronun aumento enlaprecisióndelbotíndebajo, a diferencia del grupo controlmostró una disminución significativa enlaexactitud de saqueo mediante lademostración de que la baja, probablementela falta practicar durante el experimento hace que lahabilidad adquirida no tiene suficiente para ser utilizado conlamismaconsistenciarendimiento. Se concluyó que laimagineríadel motor influye positivamente enlaprecisióndelbotíndebajo de principiante jovenenel voleibol.

PALABRAS CLAVE: Lancha Imagery; Los jóvenes; Voleibol.

A INFLUÊNCIA DA IMAGÉTICA MOTORA NO DESEMPENHO NO SAQUE NO VOLEIBOL
RESUMO

Vários autores (GODTSFRIEDTet al., 2010; MONTIELet.al., 2014) têm discutido a relação entre a preparação mental e o desempenho desportivo, e como a imaginação produzida de modo frequente, organizado e direcionado para uma determinada tarefa pode influenciar na realização prática desta mesma tarefa. O objetivo deste trabalho foi verificar se a imagética motora altera a desempenho do saque por baixo de jovens iniciantes na prática do voleibol. Para tanto, a amostra foi composta por 21 jovens, que foram divididos em dois grupos denominados grupo experimental formado por 10 jovens com a média de idade de 15,8 anos (dp= 1,23) e o grupo controle formado por 11 jovens com a média de idade de 16,6 anos (dp= 1,22). Para análise estatística foi utilizado software SPSS 22. O Teste de Normalidade de Shapiro-Wilk foi realizado para avaliar a distribuição dos dados da amostra e o teste t studentpara calcular a diferença intergrupos e entre grupos, considerado para o nível de significância p<0,01. Os resultados encontrados demonstraram que não houve diferença significativa entre os grupos no pré-teste demonstrando a semelhança técnica entre os grupos. Ao comparar os grupos antes e após o programa de imagética motora foi encontrado uma diferença significativa no grupo experimental que apresentou um aumento a precisão do saque por baixo, diferentemente do grupo controle que apresentou uma queda significativa na precisão do saque por baixo demonstrando que, provavelmente, a falta que pratica durante o período da experiência faz com que a habilidade adquirida não tenha consistência suficiente para ser utilizada com o mesmo desempenho. Concluiu-se que a imagética motora influência positivamente na precisão do saque por baixo em jovens iniciante no voleibol.

PALAVRAS-CHAVE: Imagética Motora; Jovens; Voleibol.