16 - INFLUENCE OF MENTAL TRAINING FOR ATHLETES THROUGH THE AMATEUR BIATHLON INDOOR CYCLING PRACTICE

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INTRODUCTION

According Samulski (2002), the role of psychological training is to develop and improve skills and cognitive skills can be psychological, motivational, emotional and social development of athletes, coaches and teams through the application of techniques and programs of the Mental Training (TM). Fleury (1998) defines TM as a work directed to the conditioning of the mind that thinks so, and the mind that feels, is part of the training of psychic abilities, mainly used to enhance the training and is based on the principle that we can exert greater area our thoughts, feelings and therefore our behavior.

In medicine the TM is used in the rehabilitation of brain diseases, and its effectiveness is proven in several studies (Pacheco et al, 2007; Ferreira, 2008, Cabral et al, 2010). Specifically in the sport, Marshall (2000) and Wohldmann et al (2008), suggest that mental conditioning is as important as physical training (strength work, endurance).Studies have shown the influence of exercise for the improvement of physical and cognitive abilities. Brownell (1995) states that in addition to physiological benefits, exercise produces positive psychological effects such as improved mood, reduced stress, increased self-esteem due to improved self-efficacy and cognitive schemes that promote optimistic thinking and can forget stressful situations day-to-day. In addition, Marshall (2000) suggests that practices of visualization, goal setting, relaxation techniques are effective tools for training, as an example above describes the author to propose self-transcendence, share achievements, remind you of your successes and targets already achieved, can be a good tool to improve training.

The high performance athlete needs improvements generated by both the exercise as related to mind, such as concentration, anxiety management, self-motivation, persistence and ability to tolerate pain, in addition to setting goals that are goal setting, in connection with the thoughts and behaviors (PINESCHI, 2010).

Based on the evidence described above, the junction of TM with physical training can be an important ally for improving athletes' performance, however, some variables are important for the efficient applicability of the TM, among them the experience of the applicator techniques TM, the determination and awareness of the athletes involved in the experiment, and especially the environment where experiences occur, given the need of learning the essential techniques for mind control. Thus, the TM, developed into a sport that will not change the environment, may allow the athlete to focus on higher learning which will facilitate a greater cognitive control of your body. The Indoor Cycling because it is a sport performed in stationary bikes can facilitate the use of TM. Dechamps and Domingues Filho (2005) describe that in this mode you can work the mind when, for example, using the visualization technique to simulate a road, or a proposal for self-overcoming leaving doubts how far will be the limit of human.

So, what influences the use of techniques allied to the TM mode Indoor cycling can provide?

OBJECTIVE

Analyze the influence of TM on amateur athletes through the practice of Indoor Cycling.

MATERIALS AND METHODS

After signing an informed consent, 10 individuals participated in the experiment, all males, golfers Biathlon at least five years, and mean age was 30.09 (14.83) years.

The volunteers practiced Indoor cycling classes using the TM for a period of 12 weeks, lasting 50 minutes each session and held three times a week. During the research the athletes maintained the same level of training Biathlon, and the daily workout for the average swimming 2.500me 5 km into the race, totaling a weekly average of 15.000 for swimming and 30 km run. Indoor cycling classes combining the TM occurred in a room heated to a temperature of approximately 22 ° C in the stationary bikes Schwinn ®, with sound equipment and water fountains nearby.

The training program consisted of periods of 3 to 5 minute warm up, main part of 30 minutes and 5 to 10 minutes back calm during these periods practitioners were encouraged to vary their position on the bike as sitting, two footprint (standing) and three footprints (standing, holding the far side of the handlebars, hips back and more inclined torso). The TM was used in a progressive manner with respect to class time, 30% of the time in the first three weeks, 60% of the time of the 3 rd to 6 weeks and 90% of class time in the last six weeks of the experiment. During the program practitioners in cycled light intensities (1), mild (2), moderate (3), strong (4) and strong (5), according to the scale of Wilder and Brennan (1993).

We used nine strategies TM: 1 - view, through the senses, visual, auditory and kinesthetic 2 - associated state, in which the individual is within your experience and your body, seeing through their eyes; 3 - dissociated state, where the individual is out of your experience and your body, seeing as if you were watching a movie itself 4 - submodality, use of positive experiences that the person does well and use them for experiments in which the practitioner does not perform efficiently trying to change the situation or act that is not good; 5 - creation of anchor functions as a button that activates when the person most in need, for example the concentration at the time of competition, the person creates a time before moving the which recalls a situation that was extremely concentrated, and the day of competition triggers this movement (anchor) to wake up again one day of extreme concentration, 6-autogenic training, relaxation method often concentrate; 7 - use of positive phrases and challenging; 8 - modeling, grab a gesture of an athlete or individual who perform the movement as well consider and pass for you; 9 - setting goals.

During the implementation of the proposed four tests were related to the TM in order to investigate whether the

athletes were learning some of the techniques exercised. The tests were performed on stationary bike for Indoor Cycling by analyzing the maximum cycle pedaling in a minute. The resistive load set for the tests was determined individually and remaining fixed during the four tests for the five perceived exertion (Wild & Brennan, 1993).

The order of tests was applied as follows: in the first experiment they were asked to perform the task without using the techniques learned during the TM. Since the experiments 2, 3 and 4, volunteers were encouraged to use the techniques of TM. The three techniques were investigated TM performed the following sequence: goal setting where participants should increase the frequency of pedal cycles every 10 seconds; display dissociated state, where participants had to simulate participation in a competition with beginning, middle and established order and finally the use of positive phrases and challenging, this test they were asked to try to overcome all other strategies. The interval between each test was 15 minutes of active rest.

STATISTICAL ANALYSIS

After confirming the normality of the data, we chose to use the Student's t test for paired samples. The level of significance was accepted at $P \leqslant 0.05$.

RESULTS

Table 1 - Comparison of the maximum frequency of turns in Indoor Cycling bike for 1 minute using the following conditions : 1 - without the use of mental training techniques; 2 - setting goals; 3 - Preview dissociated; 4 - positive statements and challenging.

TESTS	1	2	1	3	1	4
Average	55	66,5	55	77,8	55	75,7
S.D.	20,4	21,7	20,4	27,2	20,4	28,4
Dif_abs	-11,5*		-22,8*		-20,7*	

S.D., Standard Deviation ; Dif_abs – absolute diference . * Indicates significant difference between tests (P⩽0,05).

Using data obtained from table 1, one can observe that all strategies TM had significant difference when compared to the condition of not using mental training techniques.

Table 2 – Comparison of the maximu m frequency of turns in Indoor Cycling bike for 1 minute using the following conditions: 1 - without the use of mental training techniques; 2 - setting goals; 3 - Preview dissociated; 4 - positive statements and challenging.

TESTS	2	3	2	4	3	4
Average	66,5	77,8	66,5	75,7	77,8	75,7
S.D.	21,7	27,2	21,7	28,4	27,2	28,4
Dif_abs	-11,3*		-9,2*		2,1	

S.D., Standard Deviation ; Dif_abs – absolute diference . * Indicates significant difference between tests (P⩽0,05).

Based on data presented in table 2, there was significant difference between strategies 2 and 3, as well as 2 and 4, however, showed no differences between conditions 3 and 4.

DISCUSSION

Studies such as Fonseca et al, (2007), Castro and Santos (2007) and Silva (2009)analyzing the effect of teaching techniques treinamneto mental, related to sport, indicatedpositive effects on athletic performance and is indicated technical training ascomplementary.

Analyzing the results obtained in this research, we can see that using TM techniques were more efficient in performing a task for amateur athletes of maximum effort in IndoorCycling bike compared the strategy without TM, confirming the findings of Santos (2008), Santos and Alves (2006).

When comparing the strategies used in TM, one can observe that the strategy of viewingand phrases separated positive and challenging showed better results than the technique of goal setting, these results are confirmed in part on studies that compare variousstrategies TM as the works of Ruby and Decety (2001) and Azevedo and Samulski (2003).

CONCLUSION

The TM was shown to be an important and complementary to physical training, as the athletes experienced significant improvements when compared to condition without TM. These data confirm the findings highlighted in the academic literature, that after learning the TM technique the athlete has the potential to make its use in various conditions in order to improve the physical and mental performance.

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INFLUENCE OF MENTAL TRAINING FOR AMATEUR ATHLETES THROUGH THE INDOOR CYCLING PRACTICE

SUMMARY

The Mental Training (TM) is a procedure used to assist in the physical training of athletes, where the mind through conditioning the athlete can improve factors related to the competitive situation, such as reduced anxiety, improved self-control and motivation. In addition, the TM with physical training can be an important ally to improve the physical and psychological capacities. The TM, developed into a sport that will not change the environment, may allow the athlete greater focus on learning the essential techniques for greater cognitive control of your body. The Indoor Cycling because it is a sport performed in stationary bikes can facilitate the use of TM. With the objective of this study was to analyze the influence of TM on amateur athletes through practice Indoor Cycling. The study lasted three months, three times weekly, lasting 50 minutes each. After signing the informed consent from volunteers, 10 athletes participated in the experiment. In one recent class was proposed a test related to TM in order to know if the athletes had learned to use some of the techniques of TM, such a test was carried out on the bike stationary indoor bike, analyzing the pedaling cycle in a minute, where was a stipulated charge and within a minute should do as many rounds were held in the same class four tests identical to that in which the strategies were modified, the first strategy without the TM and the other with the TM. According to the results obtained it can be concluded that the TM was shown to be an important and complementary to physical training, as the athletes had better performance with its use.

KEYWORDS: Mental Training, Indoor Cycling, Athletes

INFLUENCE DE LA FORMATION MENTALE DES ATHLETES AMATEUR A TRAVERS DU PRATIQUE DE CYCLISME INDOOR

RÉSUMÉ

La formation mentale (FM) est une procédure utilisée pour aider à la formation physique des athlètes, où l'esprit par le conditionnement de l'athlète peut améliorer les facteurs liés à la situation concurrentielle, tels que diminution de l'anxiété, l'amélioration de la maîtrise de soi et la motivation. En outre, le FM avec l'entraînement physique peut être un allié important pour améliorer les capacités physiques et psychologiques. Le FM, développé dans un sport qui ne changera pas l'environnement, peut permettre de se concentrer davantage l'athlète sur l'apprentissage des techniques essentielles pour le contrôle cognitif plus grande de votre corps. Le vélo d'intérieur parce que c'est un sport pratiqué dans les vélos stationnaires peuvent faciliter l'utilisation de FM. Avec l'objectif de cette étude était d'analyser l'influence de la FM sur les athlètes amateurs par la pratique vélo d'intérieur. L'étude a duré trois mois, trois fois par semaine, durée de 50 minutes chacune. Après la signature du consentement éclairé des volontaires, 10 athlètes ont participé à l'expérience. Dans une classe récente a été proposé un test liées à FM afin de savoir si les athlètes avaient appris à utiliser certaines des techniques de FM, un tel test a été effectué sur la moto vélo intérieur stationnaire, l'analyse du cycle de pédalage en une minute, où était un stipulé frais et dans une minute devrait faire autant de tours ont eu lieu dans la même classe quatre tests identique à celle dans laquelle les stratégies ont été modifiées, la première stratégie sans le FM et l'autre avec le FM. Selon les résultats obtenus, on peut conlure que le FM s'est révélé être un élement important et complémentaire à la formation physique, les athlétes avaient de meilleures performnaces avec son utilisation.

MOTS-CLÉS: Formation mentale, Vélo d'intérieur, Athlètes

INFLUENCIA DEL ENTRENAMIENTO MENTAL PARA DEPORTISTAS AFICIONADOS A TRAVÉS DE LA PRÁCTICA DE CICLISMO INTERIOR

RESUMEN

El Entrenamiento Mental (TM) es un procedimiento utilizado para ayudar el entrenamiento físico de los deportistas, donde la mente a través del condicionamiento del deportista puede mejorar los factores relacionados con la situación de competencia, tales como reducción de la ansiedad, mejora del autocontrol y de la motivación.. El TM, se convirtió en un deporte

que no va a cambiar el medio ambiente, y que puede permitir que el enfoque del deportista mejore en el aprendizaje de las técnicas esenciales para un mayor control cognitivo de su cuerpo. El ciclismo de interior, ya que es un deporte practicado en bicicletas fijas puede facilitar el uso de TM. El objetivo de este estudio fue analizar la influencia de TM en los deportistas aficionados a través de la práctica de Ciclismo Interior. El estudio duró tres meses, tres veces por semana, 50 minutos de duración cada uno. Después de firmar el consentimiento los voluntarios, 10 atletas, participaron en el experimento. En una clase reciente, se propuso una prueba relacionada con TM, con la finalidad de saber si los deportistas habían aprendido a utilizar algunas de las técnicas de TM, una de las pruebas se llevó a cabo en la bicicleta estacionaria, junto con el análisis del ciclo de pedaleo en un minuto, donde había una carga estipulada y en un período de un minuto debería hacer tantas rondas. Fue llevada a cabo en la misma clase cuatro pruebas idénticas a aquella en la que las estrategias se han modificado, la primera estrategia sin la TM y el otro con la TM. De acuerdo con los resultados obtenidos se puede concluir que la TM ha demostrado ser importante y un complementario a la formación física, ya que los deportistas tuvieron un mejor rendimiento con su uso.

PALABRAS CLAVE: Entreinamento Mental, Indoor Cycling, Los Atletas

INFLUÊNCIA DO TREINAMENTO MENTAL EM ATLETAS AMADORES DE BIATHLON ATRAVÉS DA PRÁTICA DE CILCISMO INDOOR

RESUMO

O Treinamento Mental (TM) é um procedimento utilizado para auxiliar no treinamento físico de atletas, onde através do condicionamento da mente o atleta pode melhorar fatores relacionados à situação de competição, como diminuição da ansiedade, melhora de autocontrole e motivação. Além disso, o TM com o treinamento físico pode ser um importante aliado para melhora das capacidades físicas e psicológicas. O TM, se desenvolvido em uma modalidade que não sofra alterações ambientais, pode permitir ao atleta maior concentração no aprendizado das técnicas essenciais para um maior domínio cognitivo do seu corpo. O Ciclismo Indoor por se tratar de uma modalidade realizada em bicicletas estacionárias pode facilitar a utilização do TM. Com isso o objetivo desta pesquisa foi analisar a influência do TM em atletas amadores através da prática de Ciclismo Indoor. A pesquisa teve duração de 3 meses, 3 vezes semanais, com duração de 50 minutos cada. Após a assinatura do termo de consentimento livre e esclarecido por parte dos voluntários, participaram do experimento 10 atletas. Em uma das aulas foi proposto um teste relacionado ao TM, a fim de saber se os atletas haviam aprendido a utilizar algumas das técnicas do TM, tal teste foi realizado na bicicleta estacionária de Ciclismo Indoor, analisando o ciclo de pedaladas em um minuto, onde era estipulada uma carga e dentro de um minuto deveriam realizar a maior quantidade giros, foram realizados na mesma aula quatro testes idênticos a esse, no qual as estratégias eram modificadas, sendo a primeira estratégia sem o TM e as demais com o TM. De acordo com os resultados obtidos pode-se concluir que o TM mostrou-se um fator importante e complementar ao treinamento físico, já que os atletas obtiveram melhoras no desempenho com a sua utilização.

PALAVRAS-CHAVE : Treinamento Mental; Ciclismo Indoor; Atletas