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THE ELABORATION OF THE MENTAL TRAINING PROGRAM AND EVALUATION OF ITS EFFECTS ON THE LEARNING OF YOUNG FOOTBALLERS

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Abstract:
The purpose of this study is to know that the mental training through imagery allows improving the learning of individual defensive tactical principles in young footballers, and validate the program by experimental procedures that is to say, to study its effects on learning in young footballers. Twelve national footballers, aged 12 ± 1year participated in the experiment. Among this population, two groups including a group of physical training, technical, tactical (EPTT) and a group of physical training, technical, tactical and mental (EPTTM) were formed. The group (EPTTM) was subjected to 32 mental training sessions of 20 minutes spread over 4 months with two sessions per week. The compendium of measures was made by the experimenter. These measures consisted of all ratings assigned by judges; experts obtained by the players during the various competitions, tactical execution notes were identified and recorded in the form of penalty. The average individual tactical principles (marking, pressing, cover, superiority), footballers Group (EPTTM) increased significantly mannered penalty charges reduce the pre-test to post-test (1.93point vs 0.76 point $p < 0.05$) ., while the players of the group (EPTT) increased insignificantly penalty charges decrease from pre-test to post-test (vs 1.66 1.86point point $p > 0.05$). The homogeneity of the groups (EPTTM) and (EPTT) during the pre-test, allows to suggest that mental training produces a better learning of the principles of individual tactics. This assessment allowed us to test the hypothesis raised. Indeed, the mental training associated with

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physical training, technical, tactical causes an improved learning of individual defense principles.

Keywords: mental imagery, assessment, learning, individual defense tactics

1. Introduction

Sport exposes the athlete to physical and mental demands. In training and in competition, the body has to push the limits of endurance, power, speed and strength. Similarly, the mind must be beyond the limits of concentration, self-control and determination. To become an elite athlete in any sport, you must meet a range of qualities that combine physical fitness, technical skills, tactical preparation and mental fitness. The constant quest for performance inherent in elite sport encourages all stakeholders (coaches, athletes, scientists) to developed various methods to optimize training, and improve outcomes; in recent years, the role of image and mental rehearsal in sports practice was particularly highlighted. Since the emergence of what is now known as cognitive psychology, psychologists are more concerned about the mental processes (interposed between the stimulus and response) that are responsible for learning. This concern has led them to think that learning, far from being a simple single process actually consists of a set of different processes leading to inner transformation of the individual.

Motor learning is conceptualized as being under the control of cognitive processes used in solving motor problems. Many scientific studies, especially those of cognitive psychology and even more particularly those involving mental imagery (N. Knight, 1987 N. Chevalier, Denis Boucher and Mr. D., 1987; Denis M. 1985; Denis M., N. Chevalier, Eloi S., 1989; Hall CR 1985), challenge value the role of the image in the acquisition of a motor skill or motor performance. This renewed scientific interest in the image is not unrelated to the return to fashion of the demonstration, verbal explanation or of body manipulation, all concepts and practices to educational thrown from oblivion 1970 condition now known as a multiple modeling increase the accuracy of cognitive representations and motor achievements thereunder (W. R. Carroll and Bandura A., 1990).

The effects of mental practice are found both among beginners. These results are an argument for explanatory theories of cognitive kind. For these mental rehearsal takes its efficiency the possibility it offers about building and mentally consider a representation of the situation and his own performance. What we allow to understand cognitive science is that there is a great diversity of learning styles and that these

depend players, abilities and motivations, but also situations of learning and types of physical activity into play. The mental image, which is the psychological representation of an act to perform, is a widely used teaching technique among top athletes. However, it could be developed to improve the gestural skills and learning of technical and tactical actions in football to respond quickly and appropriately to events of a match.

Football is in direct contact with the problem of taking information. It is obliged to select relevant information and interpret them appropriately to build an appropriate motor response. The player is often confronted with spots presenting several alternatives for choosing a solution. In this issue, the player reacts even more effectively to the socio motor actions it is able to anticipate future events, or even cause them. From his experiences in the game, the player builds a look of a functional chain of (Mariot, 1996). The effectiveness of this functional chain is mainly characterized by two elements: the preparation has the action from the implementation of preparatory adjustments (anticipation) in the implementation of technical and tactical actions and the notion of pretense or provocation incorrect behavior in the opponent. It aims to show the fundamental place of the strategy and tactics in the design and learning team sports. According to (Grehaine J., 1992), highlights the complex nature of 'tactical act play', it seeks to identify the components:

- Perception and analysis of the situation;
- Mental solution of the problem;
- Solution driving the problem (its result is the practical solution).

However, such sequence would correspond to an action grafting is on immobility. But it must be noted that, in practice, the player has an almost uninterrupted activity. We can speak here of a continual change in motor activity in its quality, in quantity and in its spatial orientation. The same author aims to systematically develop the cognitive abilities of a player closely with a driving training. The limited scope of this article does not allow us to extensively develop this problem (see N. Knight, 1988; Denis M. Knight N, and S. Eloi, 1989). We will retain the findings of (D. L. Feltz and Landers M. D., 1983) on sixty North American; the research is examining the effects of mental training on learning motor both in the beginner than the expert. Mental training is here understood in the sense of a systematic improvement in the use of cognitive and emotional resources and organization as a strategy. In the light of the literature mentioned above, the hypothesis of our study in learning the defensive individual tactics, mental imagery training leads to improved performance.

2. Method

2.1 Topics

Twelve national footballers, after football training center in Tissemsilt, aged 12 ± 1year participated in the experiment. These players were divided into two equal groups based on their ages, and their performance during the technical and tactical events. These footballers perform five daily training sessions per week of two fortunes.

2.2 Procedure

Among this population of footballers, two groups comprising a group of physical training, technical, tactical (EPTT) and a group of physical training, technical, tactical and mental (EPTTM) were formed. The group (EPTTM) was subjected to 32 mental training sessions of 20 minutes spread over 4 months with two sessions a week and a drive other physical, technical and tactical factors. The group (EPTT) was subjected to two hours of physical, technical and tactical training per day, five days a week. Before and after the experiment, that is to say the implementation of mental workouts , measures the degree of learning were made to the principles of individual defense tactics (marking, pressing, cover, powerplay) for each of the players of both groups.

2.2 Measurements

The collection of measures was made by the experimenter. These measures consisted of all ratings assigned by judges experts obtained by the players during the various competitions, tactical execution notes were identified and recorded in the form of penalty. A low penalty indicates good tactical execution and a strong penalty indicates low tactical execution. This collection of notes took place over two competitions. the first competition of the notes were the measures of tactical execution before the experiment (pre-test) and those of the second competition, the measurements after the experiment (post-test).

2.3 Variables

The dependent variables were measured tactical execution by way of penalty, and this with the principles of individual tactics: (marking, pressing, cover, superiority) manipulated the independent variable was the lack of mental training by imaging mental training.

3. Results

A. In the markings

Footballers Group (EPTT) rose insignificantly: Penalty reduce pre-test to post-test (1.86point vs 1.66 point p> 0.05). Footballers Group (EPTTM) increased significantly mannered. Penalty reduce pre-test to post-test (1.93point vs 0.76 point p <0.05).

B. Pressing

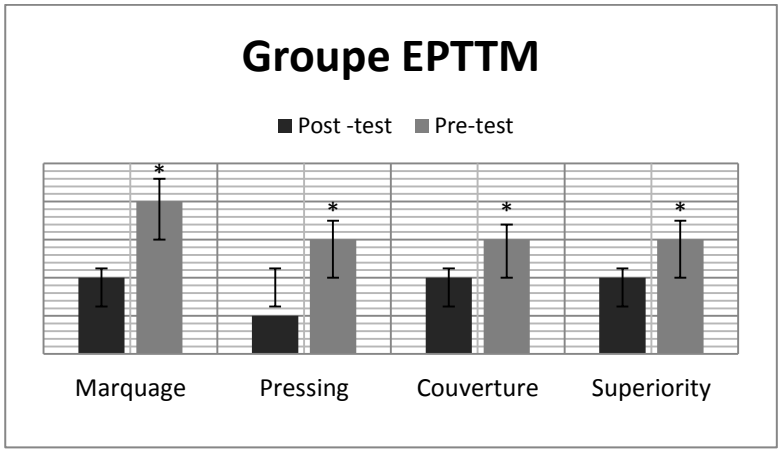
Footballers Group (EPTT) rose insignificantly: Penalty reduce pre-test to post-test (1.95point vs 1.76 point p> 0.05). Footballers Group (EPTTM) increased significantly mannered. Penalty reduce pre-test to post-test (1.83point vs 0.67 point p <0.05).

C. To cover

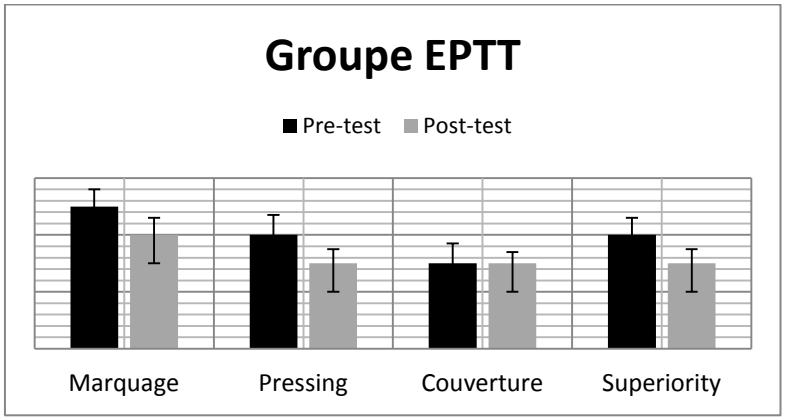
Footballers Group (EPTT) rose insignificantly: Penalty reduces pre-test to post-test (1.91point vs 1.82point p> 0.05). Footballers Group (EPTTM) increased significantly mannered. Penalty reduce pre-test to post-test (2.01point vs 0.94 point p <0.05).

D. In the superiority

Footballers Group (EPTT) rose insignificantly: Penalty reduce pre-test to post-test (1.98point vs 1.79 point p> 0.05). Footballers Group (EPTTM) increased significantly mannered. Penalty reduce pre-test to post-test (1.93point vs 0.86 point p <0.05). Significatife point p <0.05).



(Significatife point p<0.05).



(Significatife point p<0.05).

4. Discussion

The group of footballers (EPTTM) improved; the group (EPTT) did not. The homogeneity of the groups (EPTTM) and (EPTT) during the pre-test, allowed to suggest that mental training produced improved tactical execution, learning. This statement is risky, because it may be the interaction of mental training and other factors of tactical preparations, technical, and physical causes improved tactical execution. To confirm this, he should have added a group practicing only mental training. These emotional responses seem to be mediators that contribute to improved satisfaction and performance. The contribution of mental imagery can only encourage athletes of all levels to address activities with more confidence. Even more, can it be said here that mental training coupled with the tactical training and technical training and physical training allows a greater improvement than tactical training, technical and physical. These results corroborate those of Calmels (1988), of McBrid and Rothstein (1979), Riley and Start (1960), Rodgers et al. (1991). These authors state that the mental training associated with tactical training, technical and physical causes greater effects. Mental practice alters the actual implementation and improves performance (Driskell et al., 1994), although its effectiveness depends on the respect of rules and practical instructions (Guillot & Collet, 2008). More specifically, the IMK would have a particularly positive influence (Feltz & Landers, 1983; Hinshaw, 1991).

The tactical training is part of the close relationship in training process with technical, mental and athletic. For our part, we recommend a tactical-technical training for every agreement forming stage with (Weinek J. 1983), "*we should start as soon as possible tactical education, in constant contact with the transmission of technical skills*". With this principle, it is for the teacher to help build in the player several types of knowledge that underlie tactical behavior. This practical knowledge can only be learned by doing and they do not express that through behaviors in. We justify progression EPTTM

group citing firstly the theories realizing efficiency mental rehearsal phenomena are among trios, theories reporting on the effectiveness of mental repetition phenomena.

The first psycho neuromuscular theory: The ideomotor approach addressed for the first time by Carpenter (1894), postulates that "*every idea, controlled by the mind, finds expression in the muscles.*" Corbin (1972) and Richardson (1967) have taken this position to rename it *"theory of neuromuscular feedback."* It assumes a vivid picture and focused product comparable to that observed muscle activation during a real movement. Mental simulation would be strong enough to generate proprioceptive feedback can be used to strengthen the corresponding engine program.

The second Cognitive Theory: By not reducing the neuromuscular theory to a simple proprioceptive feedback and reconsidering the importance of motor and cognitive processes, Savoyant (1986) proposed an alternative approach, the cognitive theory or symbolic theory. It is based on the concept of structural and functional analogy between mental / motor imagery and perception or voluntary motor (Kosslyn, 1980; Finke, 1986). It mainly attributes the effectiveness of mental rehearsal in cognitive processing that accompanies this activity. According Heuer (1985), the information processing constitutes the core process in the mental simulation. Because of technical observation of brain activity, it could be verified, highlighting the spatial and temporal variations in blood flow that motor imagery and movement execution involve many common brain regions, particularly cortical structures and subcortical (eg Roland et al., 1980). The lack of muscle activity during the sessions of MI, whereas an increase in performance at the end of the training period is effective, suggesting that the effect is at the level of neurons involved in programming and planning of the action, not its execution. The third informational bio theory Lang (1979) places a strong emphasis on psychophysiological parameters and emotions, completing psycho neuromuscular theory. This theory emphasizes the close relationship between imaging and observable behavior. The image is seen as a series of proposals and answer descriptions, it would aim to prepare. It distinguishes, on the one hand, the stimulus proposals, which include the characteristics of the scene conceived with the support of the vision and verbalization, and secondly, response proposals that combine physiological responses to behaviors (feeling of tension developed in the mobilized muscles or visceral changes involved in the action).

5. Conclusion

This assessment allowed us to test the raised hypothesis. Indeed, the mental training associated with physical training, technical, tactical causes improved learning

individual defense principles. Our empirical work through the experiment conducted with a control group and an equivalent group, experimental, has attempted to identify what mental training can bring in this area. Rather imagery certainly proved effective in the service of learning. Players of all ages, in all categories, as coaches should put it without delay so that eventually we can organize and disseminate a culture of performance sitting on a culture of tactics it is imperative. Our work has the merit of showing the strong correlation of mental imagery on learning tactics encouraged to continue research efforts in this area. Ultimately, it is a point of view meant to rethink the Algerian football.

In this article, we have outlined some suggestions for learning tactical football principles. The development of the work on the role of mental imagery in motor learning should be accompanied by other research on the role of language itself. Teachers, coaches, but also athletes use this other form of symbolic coding to trigger action or control. It only remains to better understand reasons and mechanisms.

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