

COGNITIVE INTERVENTIONS IN HIGH PERFORMANCE SPORTS: DO SPORTS SIMULATE COMBAT?

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It is a great honor to be able to represent my country in this important CISM event. The contribution we intend to bring to the Symposium is result of research we have been conducting for eight years since 1996, in the area of Sports Psychology. The topic we will elaborate relates to “**Cognitive Interventions in High Performance Sports**”, where we have established relationships and comparisons between the emotional behavior of athletes practicing sports and soldiers in combat. The final objective is to contribute to the training of both, introducing modern concepts of Sports Psychology.

First of all, lets define Cognitive Interventions as “a program that prepares one psychologically by utilizing different techniques providing learning, maintenance and psycho-physiological development.”

The term “Cognitive Interventions” refers precisely to the psychological programs that offer **training, counseling and coaching**.

“The term **Cognitivism** refers to the manner in which people learn – structure – retain – and use knowledge.” (Ulric Nesser, 1967)

Lets focus our attention on the Emotions and Emotional Behavior in sports and combat. We will follow the given outline:

Introduction
Psychological preparation
The importance of motivation
The efficiency of Leadership in accomplishing tasks
The role of Emotion in sports and combat
Strategies
Conclusion

How can we then simulate combat and train the emotional behavior of the soldier with sports?
What are the similarities and differences in the emotional characteristics of the athletes and combatants in sports and in battle?

We will begin watching one video about the role of emotions in combat situation.

Now we will move on to the topic of psychological preparation.

Presently, the quality of tests elaborated to detect talent and provide training have been so efficient that athletes are becoming increasingly larger, stronger, and faster.

The difference between winning and losing may rest in other factors.

If that is so then we should ask: “**Why do athletes, with similar physical attributes, obtain different results?**”

We may infer that the success results in the interaction between:

PHYSICAL ABILITIES

TECHNICAL-TACTICAL ABILITIES, AND

EMOTIONAL ABILITIES which is the issue of this study.

Pay attention about the influence on sport’s emotional abilities.

That athlete training your self for 4 years to the Olympic Games, but for deficiency of concentration at just hour of competition, to fail to win.

Classical literature in psychology describes the relationship between ANXIETY (LEVELS OF ACTIVITY) AND PERFORMANCE, including mental performance, as an upside down letter “U” .

At the upper end of the inverted letter U is the ideal combination of anxiety and performance.

If anxiety is low then motivation is equally low and if anxiety is too high it saps any attempt of obtaining success.

HIGH ACTIVITY MAKE UNDESIRED AND INCONSEQUENT RESULTS.

LOOK AT THIS FILM!

Psychological training (Nitsch, 1987) refers to both the training of psychic capacities and self-control.

Training of psychic capacities – Training of mental and concentration abilities.

Training of self-control: Motivation and psycho-regulation training.

The psychological variables that must be identified and trained at all times whether in a sportive or military context are the following:

IN RELATION TO THE TRAINING OF PSHYCIC ABILITIES:

LEADERSHIP TECHNIQUES;

CONCENTRATION;

ATTENTION;

DEVELOPMENT OF MOTOR ABILITIES.

IN RELATION TO THE TRAINING OF SELF CONTROL:

EMOTIONAL BALANCE;

MOTIVATION;

CONFIDENCE;

STRESS CONTROL.

The entire training process, supported by RAUL MOLET, indicated that the preparation be structured into macro periods utilizing diverse techniques and enabling the individual to reach his/her highest physical – social – psychological development.

Through the Cognitive System that promotes the human capacity of adapting to the environment, one learns to organize and control one’s behavior in situations that bring uncertainty and insecurity.

Therefore, the athlete’s response to a given stimulus in sports is highly influenced by his/her emotional behavior and the subjective analysis of a given situation.

Regarding MOTIVATION, we must have in mind that teams that are winning are usually formed by people that are dedicated and motivated.

We may use the definition, according to Dietmar Samulski, 1995, where he emphasizes that – “Motivation is an active process, that is intentional and focused on a specific goal, and which depends on the interaction of PERSONAL (intrinsic) and ENVIRONMENTAL (extrinsic) factors. Motivation is consequently divided in two sections having:

An ENERGETIC component: – which depends on the physiological level of conditioning of an individual and,

A BEHAVIORAL component: – which depends on the intentions, interests, motives, and goals that an individual plans to meet.

LEADERSHIP is defined as “**the capacity to act on a person or group to achieve a goal under any circumstance.**”

Therefore, the leader must have the following attributes:

1) PERSONALITY with the greatest number of behavioral traits that influence the group to recognize the leader’s competence,

2) MOTIVATION enough to influence the group. Motivated individuals will adopt the desired behaviors,

3) COMMUNICATION between the leader and the group must foster a communication channel that is accessible to all,

4) The leader must demonstrate EMPATHY / AFFINITY with all, in order to perceive the group dynamics, incorporating central rules and values and having the capacity to answer to the group’s needs.

Let's speak about the role of the **Emotional Behavior** and immediately after about the **Psychological Strategies** that may be utilized in the sportive/military training and, in this fashion, end our presentation with the **Conclusion** which will bring the original question – **Can sports simulate combat?**

In relation to the emotional behavior, we must understand the three-dimensional system of Emotions. According to Hackfort, 1993, **EMOTION “is a complex system which inter-relates COGNITIVE PROCESSES: PSYCHIC, PHYSIOLOGICAL and SOCIAL SYSTEM.”**

The relation between emotion and outcome, depends on these 3 factors and must be analyzed at a more profound level considering:

What kind of emotion does it produce? (quality / intensity – happiness, fear, stress...)

In what social context does it occur?

What effect does it cause? (physiological reaction – adrenalin production, endorphins...)

P.S. - ENDORPHINS are endogenous substances similar to morphine that act upon the cerebral areas and seem to be linked to sensations of well-being and/or pain during physical activities.

Therefore, to conquer the proposed goals, emotional balance is indispensable, among PHYSIOLOGICAL – PSYCHOLOGICAL AND SOCIAL SYSTEMS.

In the sports arena, research has investigated the positive emotional states that are present among successful athletes and professionals.

Research conducted with players, surgeons and alpinists, by Csikszentmihalyi, 1985, identified two characteristic behaviors within these groups:

“FLOW-FEELING” (sensation of fluidity) – a sensation of happiness, identified with the activity of concentration. The intrinsic motivation stood out – playing / competing for pleasure and fun provokes this “flow-feeling” and helps obtain success.

“WINNING-FEELING” (sensation of victory) – demonstrated that the emotional states of the winning sportsman displayed characteristics of:

CONCENTRATION – protecting oneself of external disturbing stimulus,

GREATER TOLERANCE TO PAIN – not tiring, feeling frail or in pain and

SHIFT IN PERCEPTION – focused attention on the given task.

Consequently, it is not a specific situation that determines the emotion that will be present, but the subjective evaluation the person makes at the given time.

The interaction of the three factors mentioned is what determines the positive or negative effect resulting from the emotional behavior.

The psychological acting on the physiological – generating positive or negative sensations of discomfort (fear – perspiration – nervousness, etc.) as well as,

All the winners management your own emotional behavior with some fashion individual great many.

About Psychological Strategies, we can say that Emotional Control may be acquired by:

- an efficient physical-technical-tactical preparation;

- obtaining detailed information about the opponent (avoiding thus the fear of the unknown) and, utilizing **Psychological Strategies** (self-regulation) – RELAXATION – MOTIVATION – STRESS MANAGEMENT, which is our next discussion topic...

We understand PSYCHOLOGICAL STRATEGIES OF INTERVENTION as a concept that supports the training of diverse emotional abilities utilizing specific techniques, such as:

VISUALIZATION and MENTAL IMAGERY;

ANXIETY CONTROL;

RELAXATION TECHNIQUES;

PSYCHOPHYSIOLOGICAL CONTROL WITH BIOFEEDBACK.

These techniques should be utilized during the physical-technical-tactical training, producing the desirable differential between a winning and losing athlete.

Well-trained winning teams currently utilize strategies that focus on mental training.

Unfortunately, due to lack of time, we won't go into further details about this issue.

Finally, these techniques prepare the human being to face challenges with DETERMINATION – COURAGE and TRANQUILITY.

Mental training works best when one sharpens the capacity to experience each step of the training process, attentively observing colors, listening to sounds, taking in fragrances, and feeling the movements that surround the individual.

This enhanced attention also permits, according to scientific research, the observation of physiological responses such as: heart rate increase, perspiration, muscular contractions, etc.

There are certain psychological profiles present in people with winning personalities, as we can observe in this study that demonstrates the profile of a well-prepared athlete. These are: DRIVE – DECISIVENESS - DETERMINATION.

Where we can see only factor VIGOURS is high and all the others factors like STRESS – DEPRESSION – ANGRY – FATIGUE are low.

Thus, the goal established was to correlate aspects of OPERATIONAL EFFECTIVENESS – PHYSICAL APTITUDE and PERFORMANCE in developing the ideal capacities to execute proposed tasks, leading us to the following CONCLUSION:

“The modern combatant, as well as the elite athlete, depend on the adequate psychological preparation that will allow him/her to work under pressure, enduring pain, to concentrate on tasks, to have persistence, displaying a positive aptitude and participating in competitions or missions, feeling calm and secure.”

“In this fashion, we see in military competitive sports of high performance an economical solution to military training, comparable to the harsh realities of combat, since both demand equivalent emotional, physiological, and physical conditions.”

“Military sportspeople may be trained to conquer given objectives giving the most of themselves in swimming pools, courts, fields, tracks, as well as in modern operation terrains”

Thus it is suggest, that the emotional behavior may be trained and evaluated through competitive sports.

The impact of the efficiency and importance of military sports reflects worldwide, as we consider the elevated percentage of military athletes that obtained medals in the last Olympic Games in Sidney, Australia / 2000 totaling 21 % of all the Olympic medals. That is, of every 5 medals won, a soldier won 1.

ABOUT ATHENS, WE HAVEN'T GOT THE STATISTICS YET!

Brazil has some soldiers that have stood out worldwide, throughout time, in the sports arena.

An example would be of Sgt João Carlos de Oliveira, – that is a nickname given him for his jumping abilities. He was a world Record breaker and three times world champion in the Triple Jump modality.

In the scientific-sports area we had the honor to host the CISM International Symposium in 2002, in our lovely Rio de Janeiro. I am certain that some of you gentlemen have fond memories of that beautiful place!

We can training in sports some essential attributes like we saw at the beginning of the presentation like COURAGE – DETERMINATION – CONFIDANCE AND LEADERSHIP.

WE HAVE TO PREPARED TO COMBAT, AS WELL AS TO HIGH LEVEL SPORTS WITH THE BEST OUR SELF.

LOOK AT THIS FILM, WICH CONTAIN THE OFICIAL WORD OF THE INTERNATIONAL OLYMPIC COMITE.

To end the presentation, I would like to leave as a last message, the wise words of General Douglas Mac Arthur: **“Back in the battlefields, I was convinced that the soldiers who practiced sports had become the best combatants.**

They were the boldest, hardest and most courageous of those that fought along side me.

These men, when they took part in battles, fighting other human beings and submitting to the rules of the combat, were the ones that more readily were prepared to accept and accomplish missions.”

GENERAL DOUGLAS MAC ARTHUR

WE WILL COME BACK TO BRAZIL TOMORROW, WHERE WE WILL HOPE YOUR CONTACT.

IT IS SO KIND OF YOU YOUR ATENTION!
THANK YOU VERY MUCH!