“BABEŞ-BOLYAI” UNIVERSITY CLUJ-NAPOCA

FACULTY OF PHYSICAL EDUCATION AND SPORT

DOCTORAL SCHOOL OF PHYSICAL EDUCATION AND SPORT

THE IMPACT OF ATTENTION AND EMOTIONS ON SPORTS PERFORMANCE IN THE FOOTBALL GAME AT THE AGE OF 7-10 YEARS

Doctoral thesis summary

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Contents

3.1. Sport psychology in Romania
3.1.1. Definition, the role of psychology football
3.1.2. Psychic barriers
3.2. Emotional skills and their role in performance sports
3.2.1. Definitions of emotions
3.2.2. Emotions and their role in performance sports
3.2.2.1. The role of emotions
3.2.2.2. Theories of emotions
3.2.2.3. Emotional skills
3.2.3. The emotional states of the athletes in competition
3.2.3.1. The importance of positive thinking
3.2.4. Mental training
3.2.5. Stress
3.2.5.1. Characteristics of stress in athletes
3.2.5.2. Preventing and combating sports stress
3.2.6. Anxiety
3.2.7. Negative emotions
3.2.8. Visualization
3.3. Attention and its role in sports performance at a young school age
3.3.1. Definitions of attention
3.3.2. Forms of attention
3.3.3. Attention classification
3.3.4. Qualities of attention
3.3.5. Distraction
3.3.5.1. Disruptive factors
3.3.6. Distributive attention
3.3.7. Pathological aspects of attention
3.3.8. Concentration

Part II RESEARCH METHODOLOGY AND PILOT STUDY

Chapter 4. The methodological approach of the research

4.1. Research premises
4.2. The purpose of the preliminary research
4.3. Preliminary research objectives
4.4. Preliminary research hypothesis
4.5. Research methods used and their application
4.5.1. The method of observation
4.5.2. Statistical method
4.5.3. Documentation method
4.5.4. Survey method
4.5.4.1. Semi-structured emotions interview
4.5.4.2. Semi-structured thoughts interview

KEYWORDS: football, sports performance, attention, concentration, emotions, intervention program, juniors, children, sports training, specific training, psychological training in sports

Introduction and argumentation of the topic

This research started with the following question: “What are the psychological factors that we can improve at the age of 7-10 to increase athletic performance and to give children a start for success, stability and safety?"

In my activity as a football coach for children and juniors, which I have been carrying out for eight years and which has in its center the education, training and development of motor skills, I have not infrequently encountered a series of difficulties in obtaining sports performance. Therefore, we started this scientific approach, starting from the following objectives: First of all, we aimed to demonstrate that emotions and attention are the main psychological factors that promote sports performance. Secondly, we **wished to offer** to the coaches who carry out such an activity a protocol that they can use in training for mental training.

Research motivation

Physical activity is extremely beneficial at this age, and starting the activity in the right way can be a small chance in plus for success. The concept of unitary training of children and juniors in football is a requirement increasingly expressed by many coaches. It seems all the more necessary, as there is a need for the preparation process at the level of 7-10 years to be framed within the limits of appropriate coordinates of age peculiarities, as well as the priority objective of increasing a greater number of authentic values for high performance football.

Part I THEORETICAL-SCIENTIFIC FUNDAMENTALS OF THE WORK

Chapter 1 General characterization of the age of children from 7-10 years

1.1. Growth characteristics

This development has three stages:

- 1 biological development - refers to human physiology, morphology and biochemistry;
- 2 psychic development - tells us about the transformation at the level of psychic qualities, processes and functions;
- 3 social development - presents the behavior and requirements in the social environment.

1.2. Characteristics of anatomical - physiological growth and development in children aged 7-10 years

The shape and contingency between years and sex is represented by the increase of the height, which in girls is between 111 and 131 cm, and in boys between 113 and 132. The process of physical maturation is developing, in young students there is an increase in calcium metabolism, which has a special significance on the ossification process, the dentition, the spine, etc.

1.3. Motor characteristics of age

Motor skills at this stage are unleashed, motor learning ability is remarkable, the possibilities for fixing movement habits are very low. As a result, only systematic and conscious repetition integrates and stabilizes a new structure in the child's motor baggage. Motor skills undergo a process of consolidation-improvement

1.4. Psychological characteristics of age

Curran (2013) considers that the physical, psychological and social health of children is well defined in team sports, in our case in football. The coach has a very important role, because due to his behavior, children can show both psychological and social deficiencies. The results obtained in this study showed that a positive behavior of the coach on young football players triggered their psychological satisfaction. The conclusion of the study

emphasizes the importance of coaches on children, respect for unilateral decisions and their positive guidance. Starting school helps, within the instructive-educational process, to increase the thinking operations that are absolutely indispensable to any intellectual acquisition: comparison, abstraction, synthesis, logical characterization, classification and analysis. The child masters the rules of correct use of words, he enters the school with about 2,500 words.

Also, during this period, the ability to read and write is formed, boosting the language processes. At the end of the period, the child's main vocabulary reaches 5,000 words which then enters the child's basic vocabulary (Epuran, 2005). From the point of view of emotional development at this age, it refers especially to the construction of the child's self-concept through the way he understands himself as a unique being, interacts and interprets the emotional feelings of others and the encounters he makes with them.

Chapter 2. Sports training in the game of football

2.1. Football and its organization

Fernandes (2014) considers that the practice of sports among children, especially football, leads to an improvement in physical fitness and a healthier body by reducing cardiovascular risk factors. Balint (2007) tells us that in Romania football has become a real social phenomenon, which has found a well-deserved place in the study programs of physical education, a compulsory subject in Romanian education. The current concept of training and organizing clubs or sports associations presents the structuring of teams by age categories in which at least one coach works. At almost all sports centers, clubs or associations, coaches prepare an age group, from the moment the group is formed until the end of junior year (Bichescu, 2013).

2.2. Sports training at the age of 7-10

Sports training is defined as “a complex action process whose objective is the development of sports performance in a systematic and sport-oriented manner” (Muraru, 2008). Monea (2010) reveals that sports training is a specialized training process, which aims at studies sports performance and the performer. Sports training is a complex bio-psycho-

pedagogical process that involves a small number of exercises that are specific and are sometimes perfected to the point of refusal.

Sports training has two sides:

- training;
- education (Şandor, 2008).

Specific for the age of 7-10 is the attraction to sports. At this age it is very important to feel the joy of the game, so we need to find certain methods to prepare them as well as possible. It is the period when the child begins to have the sense of the ball and we can observe those with inclinations for this sport. Nicola (1994) quoted by Daniel (2005) argues that "teaching principles are general norms or theses that guide and give a functional meaning to the educational process, thus ensuring the necessary premises to meet the objectives and tasks it pursues in its development."

2.2.1. Peculiarities of sports training at 7-10 years

From a somatic-functional point of view, at the age of 7-10, children are full of energy and always willing to make an effort, but they also have the ability to recover quickly. The body and its extremities lengthen, which provides a disproportionate image, the skeletal system is growing, children are more prone to injuries. Thermoregulation is not as productive as in an adult, so frequent breaks are recommended

2.2.2. Objectives of the training process at 7-10 years

- harmonious growth and development;
- mastering the basic mechanisms and appropriate technical procedures for playing football on small fields;
- strengthening of the body;
- mastering the rules and rules of hygiene (Popovici, 2005).

2.2.4. Physical training in the game of football

Sport-specific physical training is very much based on what is learned in general physical training. In this case, the physical training specific to the sport continues the physical

development of the athlete, but specific to the sports branch on which it is focused. There must be a precise delimitation between general physical training and sport-specific physical training, because their incorrect practice will result in a decrease in sports performance (Half, 2002).

2.2.5. Skills development aspects

In a skill development training, the workload will be small, but a large number of lessons will be scheduled with the following topics:

1. The development of the skill is done at the beginning of the training after the warm-up part, when the body is ready for efforts in order to achieve the objectives.
2. Restoring exercise capacity is very important, so sufficiently long rest intervals should be left between exercises.

2.2.6. Strength in children and juniors

Crăciun (2006) characterizes strength as "the psychomotor ability to exert efforts to overcome, maintain or yield, in relation to an external or internal resistance, by the contraction of one or more muscle groups."

The force is presented in two forms:

- general strength - refers to the strength of all muscle groups;
- specific force - represents all forms of manifestation typical of a branch of sport.

2.2.7. Aspects of resistance development

Resistance is determined by the working capacity of the circulatory system, respiratory system and perfect coordination of the musculoskeletal system and internal organs, but also by the energy resources in the body. If the motor quality is well developed, the players will have the possibility to execute the technical-tactical procedures without visible efforts and without precision decreasing. Endurance can improve at any age.

Resistance is divided into two broad categories:

1. General resistance
2. Specific resistance

It is a priority to develop resilience in growing children and it is necessary to pay more attention to it at this age. Children have lower anaerobic energy than adults. With puberty, this capacity increases, which determines the adaptation and choice of training methods, content, choice of dosage, intensity and duration of effort depending on the qualities of children.

2.2.8. Technical training of 7-10 year old football players

These procedures include both the handling of the ball and the movements made by the players in order to perform these maneuvers (Rădulescu, 2007).
The training technique has two components:

- technical elements;
- technical procedures.

The technical elements represent the general motor forms with and without the ball, while by technical process is meant a complex of movements of the segments executed in a coherent sequence in order to perform an action during the game.

2.2.9. Tactical training in the game of football

The categories in which the tactic is classified are: Individual tactic, which represents the player's ability to perform actions together with colleagues in difficult conditions, in order to implement in the game, in all areas of the field and all phases of the game.
Collective tactics, which means all the collaborative actions of the players that are coordinated in a unitary way within the game conception in order to fulfill the objective pursued (Herța, 2000).

Children who play football play in a certain conscious or unconscious system. The system is the framework in which they have the opportunity to solve all tasks during the game. The game system becomes very efficient, if it is folded according to the level of technical and tactical training of the players, but especially on the physical abilities of the children.

2.2.10. Psychological training

During preparation, psychological training begins at the same time as physical and technical training and is done in parallel with learning each physical exercise, permanently combining sports training with education (Dungaciu, 1982).

A special importance in the coach's activity is the psychological training, being one of the most important points for achieving great results. An analogy was made between the level of stress in basketball players with football players by which it was shown that, in a competition, players with a specific training showed a slightly moderate stress towards the other participants (Kollos, 2013).

Delorme (2013) showed that age is an important factor, with a great psychological influence on children and their commitment to a particular sport. Failure can have different influences on each child, so some continue on their path to success and others reorient to other options.

Chapter 3. The role of psychology in performance sports

3.1. The psychology of sport in Romania

The psychology of sport became widespread as a scientific discipline at the beginning of the century. XX. It has developed tremendously in the last 3-4 decades. The advances of sport psychology have been determined both by the development of sport in general, but especially by the development of high-performance and high-performance sport, becoming a social phenomenon.

With the passing of time, the knowledge borrowed from psychology begins to correspond to the demands of the sports environment, thus increasing the interest of coaches, but also of athletes for the psychological perspective of their activities. Attention began to be directed towards the psychic parameter of performance (Ciucurel, 2006).

Psychological training has the role of creating through the means of sports training and through psycho-educational intervention, that mental capacity through which the athlete to achieve extraordinary results in competitions and high efficiency in training (Giurgiu, 2004).

From the perspective of Dumitru Barbu, the psychology of performance sports is the science that deals with the study of the behavior of athletes who train to cope with competitive requirements.

The psychology of sport provides football with several objectives that are subordinate to it:

- educational (psychological training of athletes);
- proxiological (efficiency of trainings and competitions);
- the field of the subject (the personality of the sports coach, of the team);
- the field of psycho-behavioral mechanisms (mental capacity, regulation of voluntary, affective and cognitive behavior) (Barbu, 2009).

3.2. Emotional skills and their role in performance sports

The Oxford Dictionary defines emotion as "any agitation or mental, sentimental, or passionate disorder, any acute or tense state" (Goleman, 2008).

Most athletes who participate in sports activities before their start have negative images and thoughts in mind about the situations they will encounter in the competition. The contest has both a financial and a social stake, and the appearance of emotions is a normal thing. Stopping these anticipatory negative thoughts would be one of the solutions to achieve the desired performance (Holdevici, 2005). Emotions help the human being in many ways. They are necessary in maintaining relationships and understanding how certain people feel. Emotions are encoded in our body and brain (Lee, 2014).

Stenseng believes that athletes who are very passionate are much more connected to sports, which means that they have a higher level of positive emotions (Stenseng, 2015).
Dias (2013) argues that over the years, emotions have secured their rightful place in the research of sports psychology. So far, several developments have been made in this field.

Particular attention was paid to positive and negative emotions, being evaluated in different competitive moments with a wide range of quantitative and qualitative tools.

Table 1. The main elements of the descriptive picture on emotions (Andrieș, 2013)

Characteristics	**Emotions**
1. Intensity (activation level)	-activated emotions and passive emotions;
2. Hedonic tone (amount of pleasure experienced)	-pleasant emotions (positive) and unpleasant emotions (negative);
3. Duration (persistence, maintenance over time)	- short-term emotions and long-term emotions;

4. Tendency of action (direction)	-emotions experienced in the person's relationship with himself, with the people around him, in the professional activity, etc .; -each emotion corresponds to a dominant tendency of action;
5. Expressiveness	- emotions with a tumultuous behavioral development (intense behavioral responses in which the whole body participates: mimicry, pantomime, pallor, redness, sore throat, change of voice,); -emotions with reduced physical manifestations;
6. Motivational value	- emotions generated by meeting needs; -emotions generated by the dissatisfaction of needs;
7. Cognitive value (awareness)	- emotions with a low degree of awareness and emotions with a high degree of awareness.

Emotional skills involve the acquisition of specific skills and behaviors in the following directions: the ability to react correctly to the evocative manifestations of others, evocative expressiveness, understanding emotions. Understanding and expressing one's own emotions but also the other primary emotions (fear, anger, joy) at the most complex (pride, guilt and shame) are specific skills in the emotional field. The child learns to feel them, to recognize them and to express them (Ştefan, 2010).

Children encounter several obstacles when they learn to regulate their emotions and behavior:

- to face fear;
- to defend himself;
- to tolerate being alone
- to tolerate frustration etc

The emotional states of the athletes in the competition

Affectivity is strongly represented in sports, whether it is sadness or joy that accompanies a failure or success, or we are talking about higher emotions related to playing sports to passion, which makes the athlete to endure strenuous training (Voinea , 2010).

The mental balance of the athlete is the result of a process of education, of an influence exerted on his personality. The psychological assembly made by anticipation based on the study of all the informative elements about the race and the opponent, the effective and motor gearing by special heating through executions as in the competition, the recovery, relaxation and breathing procedures, the orientation of thinking towards execution and not competition,

mental training, all together they lead to the structuring and modeling of the athlete's mental activity (Epuran, 2008).

Mental training

Mental training is a practice that comes to consolidate and complete the benefits of sports training. Mental training is subject to precise rules and conditions, just like a very well-structured plan (Grosu, 2012).

Mental training methods are used towards the end of preadolescence. If mental training is used in younger children, e.g. 9-10 years, coaches, in collaboration with the psychologist, must make a slight adaptation from simple to complex (Mitrache, 2001).

Mental training can take place both in groups and individually. People involved in mental training must visualize different movements, being known that a diverse gestural experience facilitates learning, which makes the training process as efficient as possible (Cojocaru, 2002).

Stress

Gilbert (2007) considers that sport is a stress-producing environment due to its character and features. Stress can be proportioned by mental, behavioral and physiological methods. From a behavioral point of view, there are difficulty sleeping, digestive disorders, lack of appetite. Physiologically, there is an increase in heart rate and respiratory rate, and from a psychological point of view, since 1973 pencil-paper tests were performed, normal approaches to assess stress (Leunes, 2008). Stress plays a particularly important role in most sports, excluding precision, in which neuro-emotional tension has exhilarating effects of mobilizing the mental, motor and somatic potential of the body. A good resistance against stress is psychological training. Distress occurs more often in hyperreactive, emotional and anxious athletes than in those with overtraining or those who show marked fatigue. It is very important for an athlete to believe in their own strengths (Derevenco, 1998).

Anxiety

There is a significant difference between anxiety as a condition and anxiety as a trait. Anxiety as a condition refers to transient anxious responses, which can occur in any person, while anxiety as a trait is an individual specificity (Hagger, 2005).

Negative emotions

When we are defeated in a competition, it is normal to have negative emotions. They help us to face the situation and to search for solutions. Therefore, at times, the negative may become positive (David, 2014). At the simplest level, Weiner, quoted by Storgman (2006), addresses the outcome of victory or failure in a competition giving rise to both negative and

positive emotions: “The particular form that these emotions can take can be seen as dependent on the result”.

Visualization

Many researchers mention that with the increase of the athletes' experience, the benefits obtained as a result of performing viewing sessions are increasing (How, 1991). Visualization efficiency is conditioned by the person's imaginative ability, but also by his belief in the efficiency of the technique, if athletes learn to behave effectively, think and train, then they will be able to reach their true potential (Hörst, 2010).

3.3. Attention and its role in sports performance at a young school age

Several researchers have studied the focus of attention in sports and found several results, including the following:

- All research showed that subjects participating in open skill sports such as boxing (Nougier, 1989), hockey (Enns, 1997), pentathlon (Nougier, 1989), football (Lum, 2002), or volleyball (Castiello, 1992) presented a higher level of attention than novices for directing attention in visual space. Athletes may prefer to pay less attention to more likely events and more attention to less likely events. This is probably not the case for athletes who practice closed-skill sports (Nougier, 1996).
- Other findings have shown that professionals can modulate their attention according to the specific requirements of Castiello's tasks (1992). Specifically, experienced volleyball players Pesce (1998) and professional skiers. Turatto (1999) showed a better adaptation of the efficiency of the attentional focus dimension, which means that, depending on the task, professionals are better than novices at modulating the attentional focus dimension.
- Exercise or sub-maximal loads reduce the reaction time among professional athletes and especially, for invalid indications, the reaction costs of attention have decreased over time (Pesce, 2004).
- Attentional orientation can also have an influence on the control of a motor ability during its execution (Le´pine, 1989) or performing a decision-making task specific to each sport.

Attention is a distinct process with its own content and being an attribute of psychic processes. The oscillation of attention occurs as an effect of protective inhibition, the fixation

of attention is easy in the case of action with moving objects or various changes are made (Iosif, 1996).

Regardless of the form in which it manifests itself, - involuntary, voluntary or post voluntary, the attention highlights a set of strongly objectifiable and relatively rigorously quantifiable dimensions, on the basis of which it can be analyzed, compared and evaluated. Among the most important such dimensions, we note: volume, concentration, stability, mobility and distributivity.

Attention has no specific content. Rather, it designates a condition of psychic life due to the fact that the environment in which we live is extremely complex, as we are quite limited in processing information. Depending on the presence or absence of the intention to be attentive, the difference was made between voluntary attention and involuntary attention. Involuntary attention is defined by the fact that orientation and concentration are done spontaneously involuntarily and effortlessly. Voluntary attention does not occur naturally. It is intentional and consciously self-regulating. The selective direction of cognitive and psychomotor activity is materialized based on the regulatory function of language.

Attention stability is the orientation and lasting focus on an object or activity. It manifests itself with fluctuations, not interrupting the basic orientation of the activity, so the attention does not freeze in a state of fascination.

Distraction from the activity in which the person is employed is produced by any stimulus, with a certain intensity, through the mechanism of external inhibition. Through a voluntary effort to focus attention, a person can work in unfavorable conditions, without a change in the quality and quantity of effective activity, due to the presence of distraction stimuli. But in such conditions, the effort is much greater, resulting in higher oxygen consumption and higher muscle tension, thus being a higher energy consumption.

There are also cases to the contrary, in which the presence of side agents brings an additional benefit to the efficiency of attention.

The most important dimension of attention is concentration, which shows the degree of selective activation and the intensity of the dominant foci in the brain areas involved in carrying out the specific psychological process or activity. It can take different values from one subject to another and to the same subject, at different times, depending on the characteristics and content of the tasks, but also on its internal state. (motivational, affective, etc.). Its content stretches between extremes known in pathology - fixity, is found in schizophrenia, diffusion, in syndrome, frontal ul and oligophrenia. Thus, in the normal state we can speak of concentration levels, low, medium, high.

The distributivity of attention refers to the question of whether or not we can do two different activities or actions at the same time. At least two simulation activities can be performed only under the following conditions:

a) One requires concentrated attention, the rest being more or less automated;

b) Attention switches quickly from one to the other;

c) The activities are added to a larger and more complex, coordinated activity. Thus, the mechanism by which several activities occur "in parallel" is based on predominance, alternation and unification (Tarnovschi, 2017).

Focusing on an object or activity implies that it reduces the flexibility of receiving and executing devices to be used with the same quality in performing other activities.

At the limit of normal there are dissipations, people who cannot have a longer attention; this includes young children, some adults, emotional and uncontrollable. (can't focus on situations that don't interest them). Also, this includes fun, people deeply concerned with a problem (scientific, philosophical, practical) and in this case inattentive to what is happening around them.

Concentration is a delicate phenomenon that is often completely misunderstood, which considerably influences sports performance. Research shows that subjects have the ability to focus on several tasks at the same time, but this ability is limited. Concentration during competitions and training involves paying attention to decisive stimuli and neglecting distracting stimuli.

Concentration is without a doubt the most representative dimension of attention. It expresses the degree of selective activation and the intensity of the dominant focus at the level of the structures and areas involved in the concretization of the specific psychic process or activity (Golu, 2000).

Part II

RESEARCH METHODOLOGY AND PILOT STUDY

Chapter 4. The methodological approach of the research

2. 4.1. The purpose of the preliminary research

The preliminary research was carried out in order to verify the research tools and the means that will be used in the research itself.

4.2. Objectives of the preliminary research

Through this pilot study we aimed to practically verify certain important organizational aspects in order to prepare the final experiment such as testing tools, means and working methods.

4.3. Preliminary research hypothesis

The introduction of a psychological training program for the development of attention and the decrease of functional emotions in the football trainings of children aged 7-10 can help:

- obtaining an increased level of functional emotions;
- obtaining an increased level of concentrated and distributive attention;
- learning and improving the technical elements and procedures;
- increasing sports performance.

4.4. Research methods

Observation method, statistical method, documentation method, survey method, semi-structured interviews (emotions, thoughts, emotional mood profile). Test battery: Prague test. Concentration test for the first school year

4.5. Research organization

The preliminary research was conducted over a period of 6 months, during which the intervention program to be used in the basic research was applied. In these 6 months we tried to observe if the means we use influence the sports performance of the experiment group. The preliminary research was started on January 4, 2015; and the intervention program was implemented until 1 July 2015.

A number of 15 subjects participated in the preliminary research, male athletes aged 9 years, members of the ACS BEST JUNIOR football club. The number of workouts planned during a week was 3 / week of one hour and twenty minutes, Monday-Wednesday-Friday from 16-17: 20. In addition to the specific training program of the football training and the intervention program proposed by us, it was applied on them, being applied to each training twenty minutes at the beginning of the training.

Chapter 5. Preliminary research results

5.1.Graphic representation, data analysis and interpretation

We used five tests, two for attention, three for thoughts and emotions and a sheet for evaluating sports performance. By applying the intervention program, we followed the attentional and emotional level of the players but also the technical-tactical level of the players.

Structured interview for thoughts

Rational thoughts

The average increase in the number of subjects with rational thoughts is statistically significant, according to the nonparametric Wilcoxon test, where p <0.001 <0.05 for z = -3.833. The effect size index r = (0.62) shows a very large difference between pre- and post-test rational thoughts.

Table 2. Rational thoughts - Wilcoxon significance test

TEST	Average	Average score difference	Mean	Minim	Maxim	WILCOXON TEST		Effect size "r „
						Z	P	
Pre	6.79	4.00	5	1	14	-3.833	<0.001	0.62
Post	10.79		11	4	15			

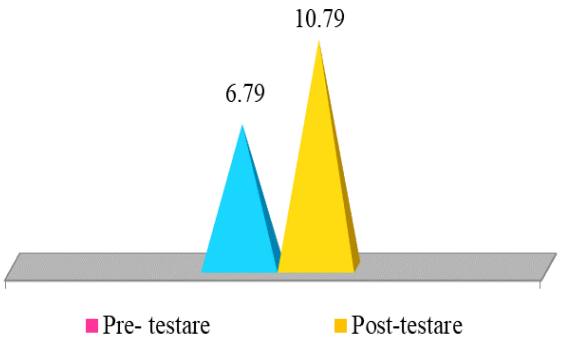

Figure 1 Average initial and final test values - rational thoughts

Irrational thoughts

Following the structured thought interview, in the pilot research, the average score corresponding to subjects with irrational thoughts decreased by 4 points, from 8.21 at pre-test to 4.21 at post-test. The percentage decrease represents a progress of 48.7%.

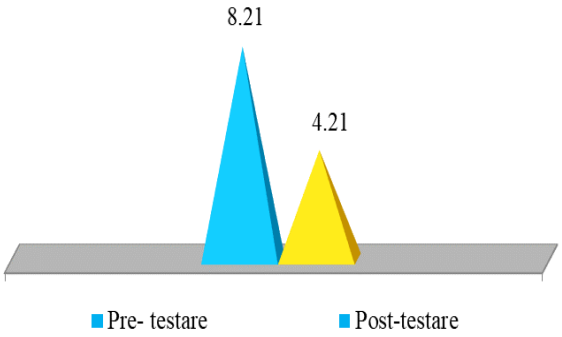

Figure 2. Average initial and final test values - irrational thoughts

Emotions

The structured interview for emotional control, in the pilot research, shows a decrease in the Linckert score by 23.06 units, from 64.53 in the pre-test to 41.47 in the post-test. The percentage decrease represents an increase of 35.7%. The nonparametric Wilcoxon test shows a statistically significant mean decrease in emotional control score, p <0.001 <0.05. for z = -3,487. The effect size index (0.57) indicates a large difference between pre- and post-test emotional control skills, with emotions decreasing significantly on post-testing.

Table 3. Emotions - Wilcoxon significance test

TEST	Average	Average scor difference	Mean	Minim	Maxim	WILCOXON TEST		Effect size
						Z	P	
Pre	64.53	-23.06	76	0	120	-3.487	< 0.001	0.57
Post	41.47		48	0	84			

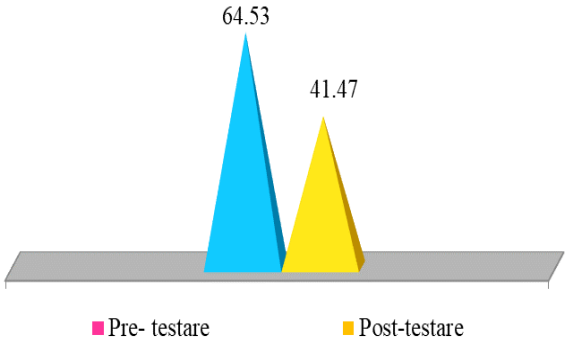

Figure 3 Average initial and final test values – emotions

Prague test

Regarding the attentional level of the children, we notice that the number of responses decreased at the end of the preparation period, indicating a progress. At the same time, the share for an average attentional level increased from 27% to 60%, for a low attentional level, the share decreases from 53% to 27%, and for a very low attentional level it decreases from 20% to 13%.

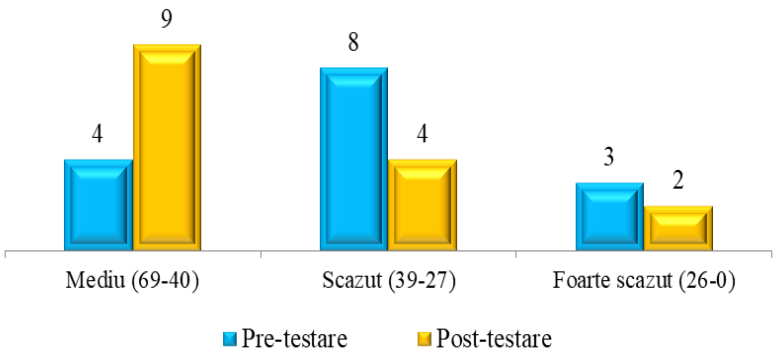

Figure 4 Attention level - frequencies observed before and after testing

Affective dispositions

Tension: The average score in the pre-test is higher than the lower limit and higher than the upper limit and in the post-test the average score is higher than the lower limit and lower than the upper limit.

Depression: Mean, pre-test and post-test scores are higher than both normal limits

Anger: Average, pre-test and post-test scores are higher than both limits

normality.

Vigor: The average pre-test score is higher than the lower limit and lower than upper limit and the post-test average score is higher than the lower limit and lower than the upper limit

Confusion: The average score in the pre-test is higher than both limits, and in the post-test, the score average is higher than the lower limit and lower than the upper limit.

Fatigue: The average score in the pre-test is higher than both limits and, in the post-test, the average score is higher than the lower limit and lower than the upper limit

Sports performance evaluation:

"Very poor" rating: Data are not homogeneously dispersed in both tests. The effect size shows a large, medium difference. The difference is statistically significant, $p < 0.001 < 0.05$, for $Z = -4.050$, according to the Wilcoxon test

"Poor" rating: Data dispersion in both tests is inhomogeneous. The effect size index shows a difference between medium to large averages. The difference is statistically significant, $p < 0.001 < 0.05$

"Medium" rating: Data are not homogeneously dispersed in both tests. The size of the effect so much a difference between medium, large. According to Wilcoxon this difference is statistically significant, $p < 0.001 < 0.05$, for $Z = -3.764$

"Good" rating: Data scatter on both tests is inhomogeneous. The effect size shows a difference between large and statistically significant averages, $p < 0.001 < 0.05$, for $Z = -3.768$, according to the Wilcoxon test.

"Very Good" rating: The data are very not homogeneously dispersed in both tests. The effect size index indicates a difference between medium to large averages. According to Wilcoxon, this is statistically significant, $p = 0.002 < 0.05$, for $Z = -3.097$

Chapter 6. Conclusions of the preliminary research

Based on the analysis of the data obtained in the preliminary tests, the specific hypothesis of this research was confirmed according to which by applying the psychological training program based on increasing focused attention and distributive attention and decreasing dysfunctional emotions we will get the desired results.

Our intervention has effects on the assumed mechanisms. The psychological training program considerably affects all the supposed mechanisms, leading to an increase in the level

of self-efficacy and to the improvement of emotional and social skills. Also, psychological intervention leads to significant decreases in anxiety levels.

The results obtained in the preliminary research help us answer the preliminary hypothesis existing in this research that creates the necessary framework for the premises of the experimental research in the next part of the scientific research.

Part III
PERSONAL RESEARCH ON THE INFLUENCE OF EMOTIONS AND ATTENTION ON SPORTS PERFORMANCE

Chapter 7. The methodological approach of the research

7.1. Purpose and objectives of the research

The purpose of the research was to verify whether following a psychological intervention implemented in football training influences sports performance.

In order to achieve this goal, the following objectives have been outlined:

- building an intervention protocol that develops the emotional and attentional processes of children, through methods that can be implemented by any coach, both in terms of difficulty and time;
- evaluating the effectiveness of psychological intervention and its influence on the game of football in children and juniors.

In carrying out this paper we started from the idea that improving psychological factors, attention and emotion can positively influence the increase of sports performance in football in groups of 9 years.

7.2. Research hypotheses

The introduction of a psychological training program for the development of attention and the decrease of functional emotions in the football trainings of children aged 7-10 can help in:

- obtaining an increased level of functional emotions;
- obtaining an increased level of concentrated and distributive attention;
- learning and improving the technical elements and procedures;
- increasing sports performance.

For this research, we used experimental factorial design. The reason for using this type of design is that factorial plans are experiments involving two or more controlled variables or factors of variation.

Test battery:

In addition to the tests applied in the preliminary research, the following two tests were added to this second part of the paper:

Concentrated Attention Test TYPE EM - 05.48 C. The results are printed on the Concentrated Attention Assessment Report

Apparatus for Combined Distributive Attention Testing TYPE EM - 05.54, EM 05.55.

7.3. Research organization

The present research takes place in the areas of Cluj-Napoca, Mediaș, Satu Mare, Gherla and Luduș at the sports base of the Best Junior football clubs Cluj Napoca, Viitorul Luduș, ACS Star Mediaș, Armenopolis Gherla and ACS Satu Mare respectively.

The experiment lasted for one competitive year starting with August 1, 2014, and the final testing was performed on June 20, 2015.

The training program of the five groups included the same number of workouts per day and per week. We used a group of 90 9-year-old subjects from several groups of football players. They will be tested before and after the intervention. The subjects were selected from the areas of Cluj-Napoca, Mediaș, Baia-Mare, Gherla, Luduș, all being enrolled in football sports clubs and born in 2006.

7.4. Equipment and materials used in research

- Frequency scale: which is an ideal equipment for a wide range of exercises to improve attention and coordination. The ladder is 6 meters long and is made of textile. It can be used both outdoors and in the gym.
- Sense Ball is the string ball developed by Cog Training, the revolutionary football method that is implemented by football clubs and federations around the world such as FA Belgian, AC Milan, RSC Anderlecht and FC Metz

- Device for combined testing of distributive attention, ability to concentrate attention and oculo-bimanual coordination, can be used successfully in aptitude testing, in activities that require a high level of attention.
- The microprocessor controlled device is designed based on modern electronic solutions. It is used to examine the stability and oscillation of attention, can provide information about the speed of observation and understanding, but also about the willingness to take risks.

The Annual training plan

The annual training plan had the following details and objectives:

Specialized sports discipline: FOOTBALL

Unit: BEST JUNIOR SPORTS CLUB CLUJ NAPOCA

School year / competitive year: 2015-2016

Group 2006

Coach: FETEAN GHEORGHE

Intermediate Training Objectives:

Development of motor skills

Strengthening individual and collective technical procedures

Necessary material equipment

25 soccer balls, regular field 40x20,

50 milestones, 15 chests, 10 fences

Psychological intervention was implemented during a competitive season starting with 1.09.2015 until 1. 06. 2016 during each training 30 minutes before or after training depending on the part applied. These means are detailed in the full thesis.

Chapter 8. Presentation and interpretation of data

The statistical methods applied in the analysis of the studied phenomenon were determined by the proposed goal or purposes. In the research, we used the computer product SPSS 23.0 specifically for the statistical analysis of data in the field of social sciences (Statistical Package for the Social Sciences).

8.1. Data obtained from the Semi-structured Thought Interview

A total of 19 questions were applied to measure observed and estimated frequencies

Pre and Post Intervention and Functional Emotions - Chi Square Significance Test ($\chi 2$)

There have been improvements in almost all post-intervention assessments

8.2. Profile of affective dispositions

Profile of affective dispositions - Tension

The score for tension decreased at the post-test by 4.41 units, from 47.78 at the pre-test to 43.37 at the post-test. The dispersion of the scores is relatively homogeneous in both the pre-test and the post-test. At the end of the preparation period, a progress of 9.2% was obtained for the voltage. We observe from the table below that both average scores fall within the normal range.

Table 4. Tension - Statistical indicators and significance test t (Student)

Statistical indicators	Pre-test	Post-test
Mean	47.78	43.37
Median	46	43
Standard deviation.	8.72	6.63
Minim	36	36
Maxim	79	72
Amplitude	43	36
Variability coefficient	18.2%	15.3%

Statistical indicators	Differences between pre and post testing	
Mean		-4.41
Progres		9.2%
Lower normality limit		35
Upper normality limit		50
t dependent bilateral test	t	P
	9.87	< 0.001
Effect size		1.04

Profile of affective dispositions - Depression

In the case of depression, the score decreased in the post-test by 5.32 units, from 58.58 in the pre-test to 53.26 in the post-test. The dispersion of the scores around the average is relatively homogeneous in the pre-test and homogeneous in the post-test. At the end of the preparation period, a progress of 9.1% was obtained for depression.

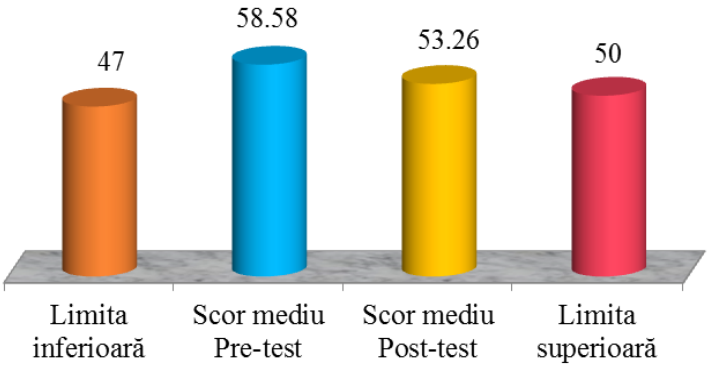

Figure 5 Average scores and normal limits – Depression

Profile of emotional dispositions - Anger

The mean score for anger decreased at post-test by 4.99 units, from 56.07 at pre-test to 51.08 at post-test. The dispersion of the scores around the mean has a relatively homogeneous structure at pre-test and homogeneous at post-test. At the end of the training period, a progress of 8.9% was obtained for anger.

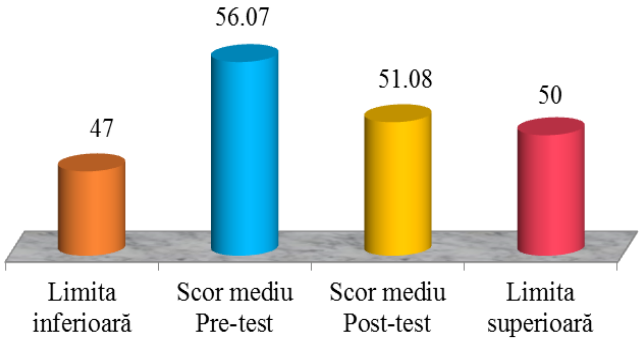

Figure 6. Average scores and normality-Anger limits

Profile of emotional dispositions - Vigor

At the post-test, the average score for the force factor increased by 3.63 units, from 67.36 at the pre-test to 70.99 at the post-test. The scattering of the scores around the average has a relatively homogeneous structure at pre-test and homogeneous at post-test. At the end of the preparation period, a progress of 5.4% was obtained for the force.

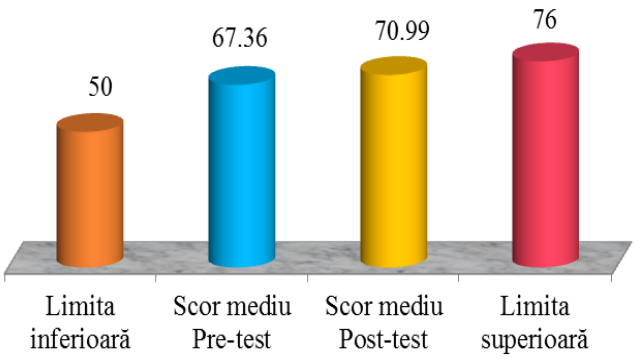

Figure 7. Average scores and limits of normality – Force

Profile of affective dispositions - Fatigue

The mean fatigue score decreased post-test by 4.58 units, from 53.27 pre-test to 48.69 post-test. In both pre-test and post-test the dispersion of the scores is relatively homogeneous. At the end of the training period, a progress of 8.6% was obtained for fatigue

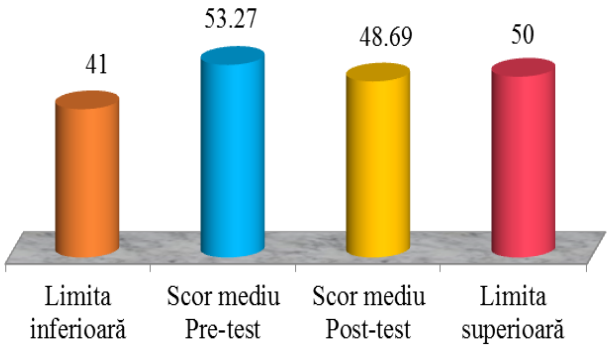

Figure 8. Average scores and normal limits – Fatigue

Profile of emotional dispositions - Confusion

For confusion, the average score decreased at the post-test by 3.51 units, from 51.71 at the pre-test to 48.20 at the post-test. The dispersion of the scores is relatively homogeneous in the pre-test and homogeneous in the post-test. At the end of the preparation period, a progress of 6.8% was obtained for confusion.

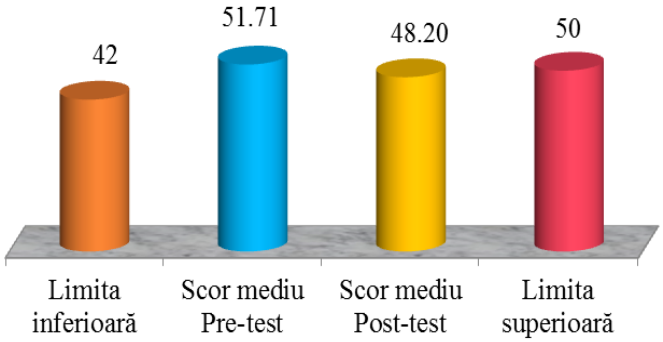

Figure 9. Average scores and normality limits – Confusion

8.3. The Prague test

The Prague test results show a statistically significant difference between the pre- and post-test results. According to the Chi square test, the significance threshold $p < 0.05$ for $\chi 2 = 19.149$. The residual value marked with * ($z > 1.96$) shows that level 4 has the largest contribution to the difference between pre- and post-test results.

Table 5. Attention level - Observed frequencies, estimated frequencies

Level of attention	Score limits	Frecvenţe observate				Estimated frecvencies	Standard residuals (z)
		Pre-test		Post-test			
		nr.	%	nr.	%	nr.	val. absolute
4 - raised	85-70	0	0%	11	12%	5.50	2.35 *
3 - medium	69-40	32	36%	42	47%	37.00	0.82
2 - low	39-27	37	41%	29	32%	33.00	0.70
1 – vey low	26-0	21	23%	8	9%	14.50	1.71
Total		**90**	50%	**90**	50%	**90.0**	

8.4. Concentrated attention

Correct answers

The correct answers to the focused attention increased at the final test, on average by 3.60. The averages have the values 21.73 at the initial testing and 25.33 at the final one. The average percentage increase is 16.6%.

Erroneous answers

The average number of erroneous responses to focused attention decreased in the final test by 2.66, the averages having values of 3.93 in the initial test and 1.27 in the final test. The percentage decrease of erroneous answers is 67.8%.

Average reaction time

The average reaction time recorded at the focused attention decreased at the final test by 0.86. The averages have the values 15.17 at the initial test and 14.31 at the final test. The percentage decrease in the average reaction time is 5.7%.

Concentrated attention dispersion

The results recorded at the dispersion of concentrated attention decreased at the final test, on average by 0.61, the averages having the values 19.53 at the initial test and 18.92 at the final test. The percentage decrease in dispersion is 3.1%.

8.5. Distributive attention

Correct reactions

The number of correct reactions increased at the final test, averaging 1.26. The averages are 130.27 at the initial test and 131.53 at the final test. The percentage increase is 1.0%. The dispersion of the results in both tests is homogeneous.

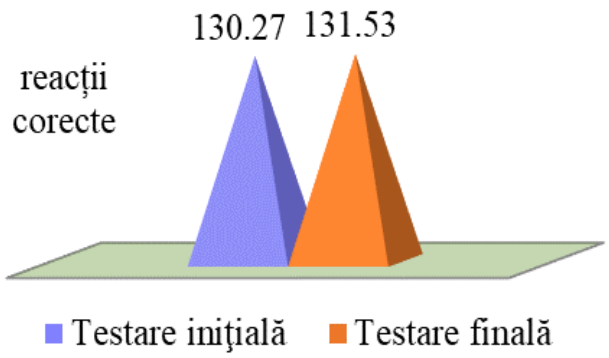

Figure 11. Average values of initial test and final test - correct reactions

Erroneous reactions

The number of erroneous reactions decreased at the final test, on average by 1.66, the averages having the values 5.13 at the initial test and 3.47 at the final test. The percentage decrease of erroneous reactions is 32.5%. The data dispersion in both tests is inhomogeneous

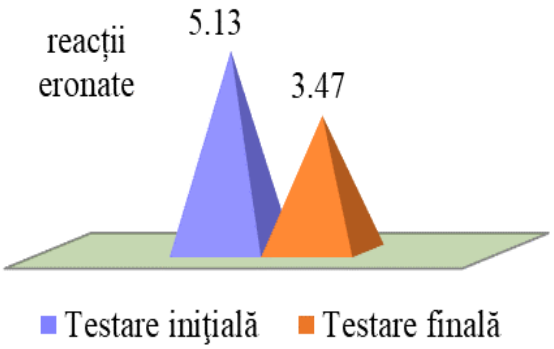

Figure 12. Average values of initial test and final test - erroneous reactions

Average performance

The average performance increased at the final test by 0.34, the averages having the values 26.05 at the initial test and 26.39 at the final test. The percentage increase in average performance is 1.3%. The results are homogeneously dispersed in both tests. The difference between the averages is small to medium

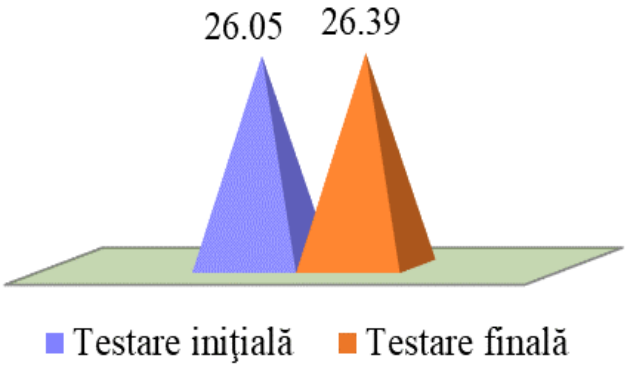

Figure 13. Average values of initial testing and final testing - average performance

Distributive attention dispersion

The average value of the dispersion increased at the final test by 0.35, the averages are 2.66 at the initial test and 3.01 at the final test. The percentage increase in dispersion is 13.3%. The results are not homogeneously dispersed in both tests. The difference between the averages is small to medium.

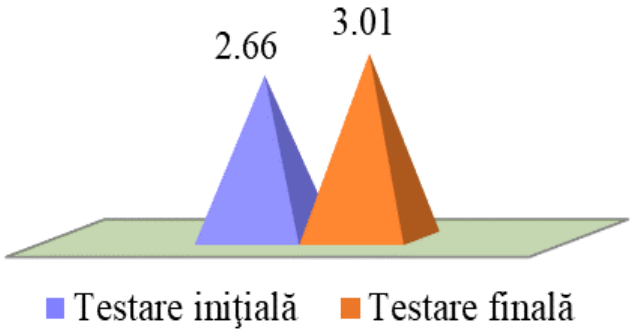

Figure 14. Average values of initial testing and final testing - distributive attention

Weight of errors per minute

The average weight of errors per minute increased at the final test, on average by 1.3%, the averages having the values 96.1% at the initial test and 97.4% at the final test. Percentage increase in the share of errors / min is 1.3%.

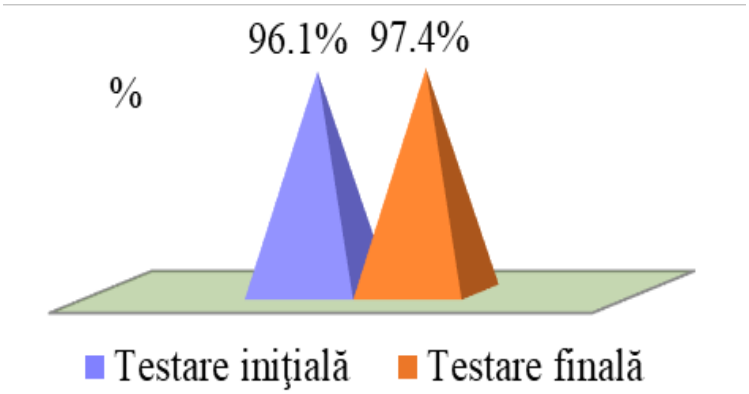

Figure 15. Average values of initial test and final test - weight of errors per minute

8.6. Evaluation of sports performance

Table 12. Summary of indicators in the test Evaluation of sports performance and results obtained

Indicatorul studiat	**Rezultatul obținut în urma analizei**
Ball kicking with left foot	significant differences between the two assessments, the threshold of significance determined p = 0.001 <0.05
Ball kicking with right foot	significant differences between the two assessments, the threshold of significance determined p = 0.001 <0.05
Ball kicking with head	significant differences between the two assessments, the threshold of significance determined p < 0.001 < 0.05
Speedfriving of the ball	significant differences between the two assessments, the threshold of significance determined p < 0.001 < 0.05
Leading the ball and overtaking the opponent	significant differences between the two assessments, the threshold of significance determined p = 0.001 < 0.05
Transmiterea mingii cu pasă lungă	insignificant differences between the two evaluations, the significance threshold determined p = 0.284 >0.05
Transmission of the ball with a medium pass	insignificant differences between the two evaluations, the significance threshold determined p = 0.216 >0.05
Transmission of the ball with a short pass	significant differences between the two assessments, the threshold of significance determined p < 0.001 < 0.05
Demarcation on receipt	significant differences between the two assessments, the threshold of significance determined p < 0.001 < 0.05
Direct demarcation	insignificant differences between the two evaluations, the significance threshold determined p = 0.111 >0.05
Characteristic of the dynamic technique	significant differences between the two assessments, the threshold of significance determined p < 0.001 < 0.05
Characteristic of the individual technique	significant differences between the two assessments, the threshold of significance determined p = 0.001 < 0.05
Characteristic of the combinatorial technique	significant differences between the two assessments, the threshold of significance determined p = 0.002 < 0.05
Relația 1x1 în ofensivă	insignificant differences between the two evaluations, the significance threshold determined p = 0.052 >0.05
Offensive 1x1 relationship	insignificant differences between the two evaluations, the significance threshold determined p = 0.083 >0.05
Play without ball	significant differences between the two assessments, the threshold of significance determined p < 0.001 < 0.05
Shooting in the area	insignificant differences between the two evaluations, the significance threshold determined p =

	0.223 >0.05
Man to man shooting	significant differences between the two assessments, the threshold of significance determined p = 0.003 < 0.05
Dubbing	significant differences between the two assessments, the threshold of significance determined p< 0.001 < 0.05
Dispossession from standing	insignificant differences between the two evaluations, the significance threshold determined p = 0.068 >0.05
Dispossession with sliding	insignificant differences between the two evaluations, the significance threshold determined p = 0.189 >0.05
Assertiveness in attack	significant differences between the two assessments, the threshold of significance determined p = 0.034 < 0.05
Assertiveness in defense	insignificant differences between the two evaluations, the significance threshold determined p = 0.984 >0.05
Playing by the game rules	significant differences between the two assessments, the threshold of significance determined p < 0.001 < 0.05

Chapter 9. Discussions, conclusions and recommendations

9.1. Discussions on results

After studying the literature, I found a minimal approach to sports psychology in children and juniors in the game of football. The role of sports psychology is noted in a series of studies conducted in different sports and at different ages: McCarthy (2013) demonstrated in his study that emotions are important for cognitive interference, concentration disturbance that provides some initial evidence. Cognitive interference is important for performance in sports in children and juniors.

Predoiu (2016) found in his study that negative emotions cause much poorer results in the case of working memory and creativity. The study was conducted on martial arts practitioners and football players. Asta (2007) considers that the use of attention-related training programs in the game of volleyball can improve the level of specific technical-tactical execution in difficult times.

Roșca (2015) concluded that the optimization of attention parameters contributes decisively to maximizing the completion of defense and attack actions in the game of volleyball in important moments

Therefore, after studying the literature, we came to the conclusion that psychological factors attention and emotions positively influence sports performance.

9.2. Theoretical conclusions

The present research allows us to identify a series of conclusions and proposals presented in the order of scientific investigations: theoretical conclusions, results of initiated studies, and applied conclusions, which address the hypotheses proposed for evaluation in this paper.

The theoretical originality of the paper consists in the fact that it highlights a new orientation of the training process by implementing the psychological training program, which significantly contributes to increasing the sports performance of football players.

The hypothesis that the development of an athlete's ability to experience functional emotions to the detriment of dysfunctional ones will significantly increase the athletic performance of players has been confirmed.

Thus, on the second test, we were able to ascertain the following aspects:

1. Dysfunctional thoughts in various specific situations of the game of football have disappeared or at least diminished;
2. Functional thoughts have been enriched and replaced by functional thoughts
3. Subjects have learned to debate their dysfunctional thoughts and replace them with functional thoughts;
4. Dysfunctional emotions have also disappeared or decreased;
5. Athletes have learned to recognize their emotions;
6. Athletes have learned to control their emotions;
7. Functional emotions have increased in intensity and replaced dysfunctional ones;
8. Subjects who underwent substantial changes at the psycho-emotional level showed an increased level of sports performance.

9.3. Conclusions specific to the experimental research

The conclusions that can be deduced from the scientific approach refer to the working hypotheses that aimed at developing distributive and focused attention, regulating functional and dysfunctional emotions and increasing sports performance in the game of football.

The results obtained as a result of the statistical processing of the recorded data are significant, which confirms the hypothesis (I1) that: *Following the psychological intervention, players will have a significantly higher level of functional emotions and post-test sports performance compared to pre -test.*

The hypothesis (I2) is confirmed according to which *Following the psychological intervention, the athletes will have a significantly higher level of attention and sports performance at the post-test compared to the pre-test.*

Within the proposed program were used various teaching materials that aimed to modernize the training in terms of sports, but also psychological.

Following the study conducted on the development of attention in pregnancy but also distributive we can draw the following conclusions:

In all tests it is found that the subjects subjected to research in the two planned test moments (initial and final) show numerically increased values at the final test, carried out after the application of the proposed program.

9.4. Elements of originality and methodological proposals

Based on the study of the literature, the results identified from this research, the conclusions drawn from the second part of the paper and those from experimental research we can say that:

- the players' performance was influenced by the psychological training program, the players have an increased level of attention in games and training which leads to a better understanding of the exercises from a technical point of view and the tactical requirements transmitted by the coach. The dysfunctional emotions from the beginning of the competitions and during the game disappeared;
- the element of originality of the paper consists in the implementation of the psychological training program within the trainings in order to increase the performances in children and juniors at the age of 7-10 years;
- The use of the psychological training program has positive effects on athletes, with an emphasis not only on sports performance, but also on the most effective ways to achieve this performance and to have an emotionally stable athlete, a happy and fulfilled child.

We also allow ourselves to make a series of recommendations related to the application of the program proposed in this paper:

- the program to be introduced throughout a training macrocycle;
- to be applied 20-30 minutes, at least 2-3 times a week before or after training depending on the objectives provided in the annual training plan;
- application of the program to all players, customized for each position.

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