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Editing and proofreading
Nada Šironja, B.A.

Translation into English
Elizabeta Holt, M.A. College of Sports and Health

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arsovici@open.telekom.rs

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Summary: Cattell’s theory has for decades been used as a conceptual framework in empirical research and practical work with athletes. Achievement motivation in sport is an important dynamic disposition which significantly contributes to sports success. The aim of this research was to determine the personality structure defined by Cattell’s theory and achievement motivation in athletes of the cadet selections in football and basketball. Some 67 athletes, 33 football players and 34 basketball players were tested. The HSPQ and MSP tests were applied. The data was processed by the descriptive statistics method. It has been shown that significant results were obtained in certain dimensions of the Cattell personality test, as well as the components of achievement motivation in sport for the young football players sub-sample. It is the task of future research papers to determine the nature of the obtained findings and the potential influence of other variables which are not the topic of this research paper.

Key words: personality dimensions, achievement motivation, football players, basketball players

INTRODUCTION

Cattell’s personality theory represents a significant and inevitable chapter in the history of psychology. The concept of the personality developed by Cattell has influenced many areas of psychology, especially sports psychology. Personality tests which have ensued from Cattell’s theory have been widely used in research for many decades as well as in practical psychological work with athletes (Havelka and Lazarević, 1981).
Relating to athletes of the cadet age, 14 personality dimensions are relevant. These are affectothymia-schizothymia, crystallized intelligence, ego strength, temperament, domination – submissiveness, surgency – desurgency, super ego strength, parmia – threctia, premsia – harria, coastenia, tranquility – self-blame, group dependency – self-sufficiency, self-sentiment and the level of ergic tension (Cattell, 1978).

The personality dimension known as affectothymia-schizothymia tests openness, readiness for cooperation, warmth, adaptability versus detached-ness, a rigid attitude, skepticism, suspicion, and a low inclination for communication. Cattell defined crystallized intelligence as the ability to comprehend ideas, as well as the speed of learning and solving problems, which is to a large extent dependent on the culture in which the individual lives. In sports, the ability of abstract thinking and quick mental adaptation and reorientation is very important for efficiency and success in the field. The dimension of ego strength measures the stability of feelings, maturity and the reality of viewing life problems, a tendency towards excitement, and the level of tolerance for frustration. It also points to the ability to integrate instinctive tendencies and social demands, which is shown through the possibility of rational managing of inner impulses and emotions.

One pole of the temperament dimension indicates apathy, a tendency towards contemplation, stability, tranquility and the other one the tendency towards excitement, hyperactivity, impatience, fluid attention. A significant dynamic disposition relates to dominance, that is, submissiveness. For competition success, significant is the tendency towards competition confirmation, self-validation, controlled aggression versus the tendency towards submissiveness, dependence, obedience, conformism. Surgency examines cheerfulness, joyfulness, enthusiasm, the level of activity, while desurgency is related to aloofness, detachment, the presence of some worry, caution, slowness.

Cattell established that super ego strength shows “a consistent character”. This is a personality dimension which relates to the behavior determined by objectives and ideals which exceed the personal. The moral principles which form the expression of personal traits such as consciousness, responsibility, the feeling of duty, persistence are the foundation of such behavior. Parmia versus threctia is the disposition of the personality which indicates the degree of domination of the sympathetic, that is, the parasympathetic nervous system.

The dimension which Cattell calls premsia – harria has an emphatic motivational component and relates to a “soft”, that is “sharp” disposition. Coastenia indicates the tendency to be solitary, and a personal wariness and
detachment. The opposite pole of this dimension indicates the tendency to be in a group and with a group, accepting general standards and setting the group before the personality.

The dimension tranquility versus self-blame describes the tendency towards feelings of guilt, a propensity towards negative predictions, and worry and anxiety in every demanding situation. Group dependency versus self-sufficiency is the dimension which indicates whether the athlete is dependent and insecure in bringing her/his own decisions or overlooks other people’s opinions as s/he does not need support and help. The dimension Cattell dubbed as the “self-sentiment” is described as an internalizing of opinions which are susceptible to social influences and values, and is shown as self-control of behavior and the tendency to leave a good impression. The last dimension of the HSPQ test measures the level of ergic tension.

Achievement motivation is most often known in professional literature as a tendency to invest effort, to achieve and carry out something which is considered to be valuable (McClelland, 1987). For the testing of the motivation of athletes, it is not sufficient to determine just the level of general achievement motivation. Active athletes are systematically exposed to specific environmental demands and situations and develop a personality disposition which Havelka and Lazarević (1981, 1990) marked as achievement motivation in sports, developing an instrument named MSP. Along with achievement motivation in sports, the MSP scale also measures the degree of emotional control and stability, and the tendency towards emotional inhibition and instability. Some research shows that in active athletes, parallel with a larger degree of achievement motivation, there is an increase of emotional self-control and stability, and a decrease of the tendency for emotional instability.

The aim of this research is to determine personality structure and the structure of achievement motivation in sports in young football and basketball players of the cadet selection. The task was to test whether there are specific traits in the personality structure and motivation of athletes orientated towards football, that is, basketball.

**METHOD**

**Variables and instruments**

Some 17 variables were tested in the research paper: 14 personality dimensions which were operationalized by Cattell’s theory and 3 components of achievement motivation in sports, as operationalized by Havelka and Lazarević.
Personality dimensions were tested by Cattell’s HSPQ questionnaire, while the structure of achievement motivation in sports was tested by the MSP questionnaire.

**Sample**

The sample consisted of 67 respondents, young football players and basketball players, ages from 13 to 15. More than a half of those tested were 15 years of age (54.5%), while there were 31.8% of those 14 years old, and 13.7% of 13-year-olds.

**RESULTS**

The results were processed by the descriptive statistics method. The mean value was determined as well as the standard deviation for personality dimensions and the components of achievement motivation for the entire sample, and separately for the football and basketball players sub-sample. The score distribution frequency was tested for every personality dimension and component of achievement motivation, both for the entire sample and the football and basketball players sub-sample. The statistical significance of the obtained frequencies was checked by the Chi-square test.

The mean value for the entire sample in the affectothymia-schizothymia dimension is 10.7, and the standard deviation is 2.68 (Diagram 1). The arithmetic mean of scores in the crystallized intelligence dimension for the entire tested sample is 7.3. Diagram 2 shows that a standard deviation of individual scores in the intelligence dimension is 1.46.

**Diagram 1: HSPQ – A (N=67)**

**Diagram 2: HSPQ – B (N=67)**
As can be seen in Diagram 3, the arithmetic mean for the dimension of emotional stability for the entire tested sample is 11.8 while the standard deviation is 3.12. Regarding the temperament, the average score obtained for the entire sample is 7.80 while the standard deviation is 4.3 (Diagram 4).

Diagram 3: HSPQ – C (N=67)  
Diagram 4: HSPQ – D (N=67)

In the domination-submissiveness dimension, the arithmetic mean for the entire sample is 9.8 while the value of the standard deviation is 2.95 (Diagram 5). As can be seen from Diagram 6, the score distribution in the dimension surgency-desurgency has been slightly moved to the left. The mean value amounts to 9.0 while the SD=3.74.

Diagram 5: HSPQ – E (N=67)  
Diagram 6: HSPQ – F (N=67)

The mean value for the dimension which tests ego strength amounts to 11.3 and the average deviation from this value is 2.82 (Diagram 7). The score distribution in the parmia-threcia dimension has been slightly moved to the left. The arithmetic mean for the entire sample is 11.6 while the value of the standard deviation is 3.17 (Diagram 8).

Diagram 7: HSPQ – G (N=67)  
Diagram 8: HSPQ – H (N=67)
For the premsia-harria dimension, the arithmetic mean for the entire sample is 9.0 while the value of the standard deviation is 3.26 (Diagram 9). Diagram 10 shows the distribution of the mean values for the coasthenia-zepisa dimension. The arithmetic mean for the entire sample is 8.3 while the value of the standard deviation is 3.46.

By testing the tranquility–inclined towards self-blame dimension, obtained was the mean value of 5.8 and a standard deviation of 3.15 (Diagram 11). The distribution of the dimension which relates to group dependency versus self-sufficiency has slightly been moved to the left (Diagram 12). The values of the arithmetic mean and standard deviation are 7.3 and 2.94.
The distribution of the Q3 factor which measures the “self-sentiment” has been slightly moved to the right (Diagram 13). The average score in this dimension is 11.3. The average deviation from this value for the entire tested sample is 3.08. As can be seen from Diagram 14, the score distribution which relates to the level of ergic tension has been slightly moved to the left. The arithmetic mean in this dimension is 6.8. The value of the standard deviation is 2.78.

The research results show that the value of the arithmetic mean for the entire sample on the P component of achievement motivation in sports is 21.6. The standard deviation is 2.10. The score distribution on the variable which relates to the degree of emotional stability in competition situations (F+) has to a certain degree been moved to the right (Diagram 15). The mean value for the entire tested sample in this component is 10.5 while the value of the standard deviation is 2.78.
deviation is 1.21. Diagram 15 also shows that the score distribution on the F-component of achievement motivation has been moved to the left. It has been shown that this sort of distribution frequency is statistically significant.

\[
\text{Diagram 15.}
\]

The values for the arithmetic mean and the standard deviation for all the tested variables, especially for the football and basketball player sub-sample, are shown in Diagram 1. The significance of the differences of the arithmetic mean of the two sub-samples has been tested by a t-test. Based on the data obtained, it can be seen that there are slight deviations from the value of the average scored for the entire tested sample. As we can see from Table 1, a statistically significant difference was obtained between the younger football and basketball players in the ego strength dimension.

The Chi-square tested the statistical significance of the frequency distribution in every dimension on HSPQ and MSP. It was shown that the score distribution in dimension B was statistically significant for the entire sample (Chi-square=73.373; df=8; p<0.01). For the football players sub-sample, it was shown that the score distribution in dimensions A was significant (Chi-square=21.818; df=8; p<0.01), C (Chi-square=22.667; df=10; p<0.05), O (Chi-square=23.333; df=12; p<0.05) and Q4 (Chi-square=24.091; df=11; p<0.05).

The application of the Chi-square test points to the statistical significance of the score distribution of the F-component of achievement motivation for all respondents (Chi-square=48.000; df=7; p<0.01). It was shown for the football player sub-sample that the frequency distribution is also significant for achievement motivation in sports (Chi-square=20.091; df=7; p<0.01).
Based on the obtained results on the Cattell personality test, it can be seen that the mean values and standard deviations correspond to the averages of these values for the tested age of athletes, according to the data of the Serbian Republican Institute for Sports.

In the affectothymia-schizothymia dimension, a lower extent of score variation than expected was obtained. The score distribution was slightly moved towards the positive pole of this dimension, which means that the tested young football and basketball players were more adaptable, more sensitive, reader for cooperation, and more attentive towards others. Such a curvature of results with no statistical significance points to a developmental specificity of the tested age group in which there is a greater social sensitivity towards peers and a readiness to conform to a group.

It was shown that frequency distribution to the crystallized intelligence dimension is also statistically significant for the young football and basketball players sub-sample. The arithmetic means for the two sub-samples correspond to the expected calculations for the cadet age in this dimension, but the extent of the variation of individual scores is slightly less. Diagram 2, which
show shows the frequency distribution for the entire sample, shows that the score distribution is to a certain degree moved to the right from the mean value. The intellectual potentials of the respondents, considering the age, leaves space for further progress.

Regarding emotional stability, it has been shown that a score distribution obtained for the young football players sub-sample is statistically significant. The arithmetic mean for this sub-sample is somewhat higher than expected for the age group, while the extent of the variation of individual scores is less than expected. This means that the tested young football players have maturity, a stability of interest, serenity and the tranquility necessary for sports success. Testing the significance of the difference between the values of the arithmetic means in the ego strength dimension has shown that this difference is statistically significant for young football players.

In the temperament dimension, the obtained score distribution corresponds to the expected calculations for this dimension and does not reach the level of statistical significance. The obtained distribution for the entire sample corresponds to a normal distribution, as can be seen from Diagram 4. The arithmetic mean for the young football players sub-sample has slightly been moved towards the phlegmatic pole, but the extent of variation of individual scores is higher. Young basketball players from this research are more impatient, tend to be highly excited and excessively active (Table 1).

Domination is one of the most important traits in competitive sports. The average values for both sub-samples in this dimension are somewhat higher than expected, though the distribution of individual scores is not statistically significant. The lower value of the standard deviation for the young basketball players sub-sample indicates that they as a group are more inclined towards competing and self-validating.

Score distribution in the surgency-desurgency dimension is not statistically significant, but is somewhat shifted towards the pole which marks desurgency. This means that respondents from this sample are more attached to inner values, are calmer, serious and more inclined towards reflection than is expected for their age group.

The results obtained for the dimension marked as “super ego strength” are not significantly significant, but the mean values for the entire sample and for the young football and basketball players sub-sample is somewhat larger than expected. This means that among the respondents there are individuals who are more emotionally disciplined, responsible and stable than is expected for their age group.

The obtained values of arithmetic means in the parmia-threcia dimension correspond with the expected values. This means that the respondents from the research are shy and reserved, but also friendly, invincible and open
for new experiences as much as is apt for their age group. The extent of variation of individual scores is less than expected, which can be ascribed to the size of the tested sample. Similar findings also come from the data obtained in the harria-premsia dimension.

The values of the arithmetic mean obtained in the coastenia-zepisa dimension correspond to the values expected for the tested age group. The respondents accept the standards of their peers and tend to be in a group. But, also typical for the adolescent age is a reflective mood and the tendency to be alone.

The score distribution in the tranquility–inclined towards self-blame dimension is statistically significant for the young football players sub-sample. They are self-confident, cheerful, calm, and without fear or worry.

The arithmetic means for the entire sample, and especially for the tested sub-samples in the group dependence – self-sufficiency dimensions do not significantly deviate from the expected mean values, but are slightly shifted towards the pole which marks group dependence. This kind of score shifting can be ascribed to the fact that the respondents belong to group sports, but also that they are in a developmental stage where there is an emphasized tendency towards a group and for obtaining acceptance from the group, as well as praise.

Even though score distribution in the “self-sentiment” dimension is slightly shifted to the right, it is not statistically significant. The analysis of this personality dimension, especially in the sub-sample, shows that the tested young football players as a group are more inclined towards self-control of their emotions and behavior, though the obtained results have not attained the level of statistical significance. However, it has been shown that the results in the dimension which measures the level of ergic tension are statistically significant for the young football players sub-sample. They are, generally speaking, more relaxed, peaceful, more stable and not frustrated, but also sometimes more lethargic and have less motivation.

The analysis of achievement motivation in sports shows that the obtained arithmetic means are expected for the component of achievement and positive emotional engagement in sports. However, it has been shown that a mean value for achievement motivation for the young football players sub-sample is statistically significant. This fact has the potential of predictive value if we take into consideration that the arithmetic mean on the variable of a negative emotional reaction is significantly lower than expected. With active athletes, along with developing sports achievement and establishing emotional control and stability, there is a lowering of the tendency for emotional inhibition and instability. This means that the young football players from this research on the level of the cadet selection have developed a stable achievement motivation and have overcome negative emotional tendencies in competitive situations.
Also statistically significant is the mean value of the component of emotional instability and for the young basketball players sub-sample. However, the declining of emotional inhibition in young basketball players is not followed by a statistical significance on the measuring of achievement motivation and/or a positive emotional engagement.

CONCLUSION

The obtained values on the HSPQ and MSP dimensions of the questionnaire correspond with the expected values for the tested age of the athletes. It has been shown that the obtained measures on the affectothymia-schizothymia dimension, tranquility–inclined towards self-blame and the dimension which relates to the level of ergic tension, are statistically significant for the young football players sub-sample. This data has a potential predictive value if it is interpreted in view of the data obtained by testing achievement motivation in sports, which points to the significance of the component of sports achievement and the measures which indicate the declining of emotional inhibition and instability in young football players.

The data obtained in this research shows that the tested young football and basketball players have many psychological traits which are a good foundation for success in collective sports, such as for example adaptability, readiness for cooperation, social sensitivity, but also domination, emotional discipline and responsibility, and a decline of emotional inhibition in situations of sports achievement.

It has been shown that, especially in young football players, there is already at the cadet age the necessary emotional stability, maturity, ego strength, the ability to adopt one’s impulsive reactions to the demands of social situations, as well as a very high and stable motivation for achievement in football and a lack of tendency to experience emotional inflexibility in stress situations linked with achievement.

Such findings are in a psychological sense very encouraging in regards to personal potential, which linked with sports qualities, can give top athletes on a senior level of competition. However, it is important to bear in mind that it is vital to work not only in improving sports potential, but also on improving the necessary psychological qualities which are very often crucial for success in top sports.
REFERENCES


PHYSICAL ACTIVITY IN DIABETES MELLITUS PATIENTS

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Predrag Lazarević1, Dragana Bubanja (MD)2 and Ivan Bubanja (MD)3
1Department of Physiology, Medical Faculty, University of Kragujevac, Kragujevac
2Clinical Center Kragujevac-Internal Clinic, Center for Endocrinology, Kragujevac
3Clinical Center Kragujevac-Clinic for Pediatric Surgery, Kragujevac
e-mail: plazarevickg@sbb.rs

Summary: The significant increase of the incidence of diabetes mellitus type 2 all over the world implies that the majority of cases are induced by changes in the way of life and the environment. The purpose of this paper is to point out the importance of controlled physical activity as a factor in the prevention and control of diabetes mellitus, especially type 2. We explained the correlation between diabetes mellitus and physical activity, and also its influence on various aspects of the disease. The recommendations on adjusting physical activity as a preventive measure in the healthy population and as a tool for controlling the disease have also been given, depending on the therapy undertaken. The modern way of life (excessive food intake, sedentary jobs, physical inactivity) leads to obesity and diabetes mellitus. One of the initial factors in the prevention and treatment of this disease is increased and controlled physical activity, which, although recognized as important, still lacks enough attention in the current guidelines for treatment.

Key words: diabetes mellitus type 2, physical activity, insulin, sport

INTRODUCTION

Diabetes mellitus type 2 (hereinafter: DM type 2) is a chronic disease that has increasing incidence and is connected with obesity in almost 80% of the cases. Today there are so many patients with DM type 2 that it is considered an epidemic and the estimations are that by the year 2025 there will be 330 million patients in the world. According to the World Health Organization’s
data published in 2002, more than 1 billion people were overweight, and 300 million were obese. (1, 2) Explanations for this were found in the changes of the way of life, particularly overeating, and a sedentary lifestyle. In contrast with this, physical activity decreases the risk of developing DM type 2 by 33% to 50% and is recommended as one of most important changes in the way of life in patients with DM type 2.

DIABETES MELLITUS

Definition

Diabetes mellitus is a syndrome of a disordered metabolism with inappropriate hyperglycemia due to an absolute deficiency of insulin secretion or a reduction in the biologic effectiveness of insulin or both.

Insulin and its importance

Insulin is a protein consisting of 51 amino acids which form two polypeptide chains interconnected with two disulfide bridges. The insulin coding gene is located on the short arm of chromosome 11. Insulin is secreted by pancreatic islet B cells, and in healthy persons, the daily excretion is 40 to 50 international units. It operates via membrane receptors on target tissues, especially liver cells, fat cells and muscles increasing glucose intake from blood. The discovery of insulin in 1922 enabled the treatment of patients with diabetes mellitus.

Classification

British scientist Himsworth noticed fifteen years after the discovery of insulin that patients with diabetes mellitus can be divided into two subgroups: insulin dependent and insulin independent. Insulin dependent patients were young patients prone to ketoacidosis, while those who were insulin independent were older patients resistant to ketoacidosis. Three decades later his observations were explained.

Insulin dependent patients have diabetes mellitus type 1 due to pancreatic islet B cells destruction caused by the autoimmune process, and require insulin replacement therapy. Insulin independent patients have type 2 diabetes mellitus, the much more prevalent form, which is a heterogeneous disorder encompassing a spectrum of defects most commonly associated with insulin resistance in presence of an associated impairment in compensatory insulin secretion.
THE IMPORTANCE OF SPORTS AND PHYSICAL ACTIVITY IN PATIENTS WITH DIABETES MELLITUS

Children and young adults have a natural desire to take part in sports activities. Besides that, some young people want to become sports professionals. There are encouraging examples of competitors that have not only competed but also achieved great success, despite their medical problems and ongoing therapy (for example, Gary Hall, who became an Olympic gold medal winner in swimming elite disciplines 50m free style and 4x100m relay while being on insulin therapy in the Sydney 2000 Olympic Games). Physical activity increases insulin sensitivity in target tissues, enabling better glucose homeostasis and lowering serum glucose levels. This allows physically active patients to either increase the glucose intake with the same dosage of insulin or to gradually lower the dose of insulin or oral antidiabetic drugs. Besides that, physical activity is the perfect way of controlling weight. Weight loss in patients with diabetes mellitus type 2 leads to better glycemic control, so patients that are involved in training programs become more aware of blood glucose levels and the need for a controlled diet.

Good glycemic control is one of the key factors in preventing complications in diabetes mellitus. Results of large studies with more than 14,000 participants have shown that the frequency of complications is much lower (by 70 %) in patients that have better glycemic control. Exercising has a profound psychological impact, and taking control over the disease is reflected in all areas of life. Self-esteem is increased, drug dependence decreased – namely, gaining control over the disease is actually taking control over an important part every daily life.

It is important to remember that a consultation with a physician must precede the start of the exercise program.

Although physical activity is beneficial to patients with diabetes mellitus, it is also an important preventive measure in the healthy population with an increased risk of diabetes mellitus. Physical activity is an important non-pharmacological measure in treating diabetes mellitus type 2 because it decreases insulin resistance. It is estimated that an increase in activity for every 500Kcal lowers the risk of diabetes by 6%, especially in the population with the highest risk for developing this condition (1). Walking, riding the bicycle and moderate physical activities (gardening, etc.) have a positive effect on the blood glucose level, but more intense exercising like running, swimming, sports games have a bigger and better influence on the blood glucose level control. Physical activity prevents or postpones the glucose intolerance that precedes diabetes mellitus type 2. Also, two well-documented studies on patients with diabetes mellitus have shown a small, but important advancement in glycemic control,
after being included in an exercise program consisting of walking and riding a bicycle 3 times a week for 30 to 40 minutes. Physical inactivity is a well-known risk factor not only for diabetes mellitus, but also for other chronic diseases (atherosclerosis, arterial hypertension, osteoporosis, colon and breast cancer) yet there are no national guides for dosage physical activity as a therapeutic measure, nor any methods for the evaluation of progress and effectiveness in patients with diabetes mellitus or in the population under risk of developing it. Unlike ours, in most developed countries there are many methods for assessment of the actual level of physical activity of the patients, and also recommendations for its use in therapy in the effort to achieve the best possible results without endangering the overall health status of the patient. In every patient with diabetes mellitus, we can determine the individual limitations for physical activity. As a tool, we use the morning heart rate at rest and during the ECG test load. This shows us that patients can be loaded up to 50% of maximum oxygen consumption even for a longer period of time during which there is a small increase of increase of blood lactate level, but without exceeding the aerobic threshold. An easier and more understandable way for the patient is the testing of maximum oxygen consumption, using this equation:

\[
VO2 \ 50\% = 0.5 \times (R_{max} - R_{rest}) + R_{rest}
\]

where \(R\) stands for heart rate and \(VO2\) for maximum oxygen consumption. In older patients, we calculate the maximum heart rate with this formula: \(160 - \text{years of age} = \text{maximum heart rate during activity}\).

Young patients with diabetes mellitus without complications can be compared with healthy individuals. They can be loaded with up to 70% of the maximum load. The effective load can be calculated in this population using the formula \(180 - \text{years of age} = \text{maximum heart rate during activity}\). To patients older than 45, the maximum load is given up to the heart rate of 130 per minute and in younger patients, up to 150 or 160 per minute. Training should be performed three times a week, lasting 15 to 30 minutes.

**Kinesitherapy and endurance load**

Kinesitherapy is determined by the stimulus loads through their intensity and frequency. Aerobic loads like ski running, bicycle riding and sports that involve running act directly and positively on the cardiovascular system. The heart rate is lowered, as are the catecholamine levels, the autonomic nervous system is better balanced, the heart action is more effective, and the coronary flow is increased. Epinephrine and cortisol are increased during activity, though significantly less during aerobic than anaerobic load. Triglycerides used for muscle activity are mobilized from fat cells. Kinesitherapy is especially important in diabetic patients, as it lowers blood glucose levels, reduces insulin
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resistance and cardiovascular risk and enables body weight loss. It is imperative to exclude coronary heart disease before starting a training program, by using an ECG load test.

The persistence of physical work

A medium intensity of training has a positive effect on high blood pressure and weight loss. Through aerobic activity, depending on the type, intensity and duration of kinesitherapy, the levels of blood glucose and insulin become normal, which leads to the need to adjust therapy for diabetes mellitus. In well-trained individuals, oxygen consumption is between 50 to 80% of maximum consumption. During intense anaerobic physical activity, heavy breathing can lead to an undesirable increase of arterial blood pressure and potential hemorrhage from the already atherosclerotically changed blood vessels. This is the reason for recommending aerobic sports activities, in which lowering of blood pressure is expected.

WHEN TO EXERCISE?

Morning is the best time for exercise, because of the endocrine circadian rhythm. The evening is not recommended for exercise for the same reason. Furthermore, balancing intake and energy consumption during physical activity is very important. Recommendations for diabetic patients are as follows:

If blood glucose is less than 7.2mmol/L, one should take before exercising 120Kcal of carbohydrates for every 30 to 45 minutes of light to moderate and 180Kcal for intense exercises.

If blood glucose is between 7.2 and 10mmol/L, it is recommended to take 60Kcal of carbohydrates prior to light to moderate and 120Kcal before intense exercises.

If blood glucose is more than 10mmol/L to 14mmol/L, no carbohydrates intake is needed for light to moderate and up to 30 minutes of intense exercises, and if training is longer than that, blood glucose levels should be rechecked and the carbohydrate intake adjusted, as recommended above.

If blood glucose is higher than 14mmol/L, exercise is not recommended because it can induce a further increase of blood glucose and ketone production.

Lowering of blood glucose level may occur in every diabetic patient. It is caused by insufficient food intake, increased physical activity, or when the antidiabetic drug therapy effect is too strong. This condition is called hypoglycemia and is recognized by the following symptoms: sudden hunger, paleness, sweating, and eventually, loss of consciousness.
**General recommendations**

- Consult with a physician when starting exercising.
- Physical activity must be controlled and constant.
- Liquids and carbohydrates intake.
- If the patient is involved in long-term physical activity, dosage adjustment is needed in both diabetes type 1 and type 2.
- If blood glucose is high and ketones are positive, physical activity must be discontinued and drug therapy intensified.
- If activity is prolonged, it is wise to take small meals during exercising.
- When a maximal effect of insulin dose applied is expected, it is necessary to reduce physical activity.
- Subcutaneous injections of insulin should not be given in areas of the highest muscular activity during training.
- Physical activity is recommended when glycemia is lower than 14 mmol/L.

**DISCUSSION**

Available data from many studies show that physical activity in patients with diabetes mellitus is at a low level despite well-documented benefits from it in both prevention and therapy. Physically more active patients use 2 to 3 times more energy than those with a mostly sedentary life style. The estimated difference in daily energy consumption between these two groups was more than 800 Kcal. This qualifies physical activity as a perfect preventive measure in a healthy high risk population (smokers, inadequate dietary style, and high blood pressure). Obese and overweight patients are less physically active because excess body mass makes physical activity more difficult, regardless of the degree of obesity. High glucose blood levels found in patients in those studies were connected with a lack of physical activity and its positive effect on glycemic control.

**CONCLUSION**

The positive connection of sport, physical activity and health was recognized by the World Health Organization. The following documents were presented in the year 2004:

1. A Global Strategy on Diet, Physical Activity and Health, and a
2. Resolution on Health Promotion and Healthy Lifestyles.
Both documents emphasize the importance of acquiring the habit of regular physical activities, even during childhood.

The degree of physical activity is on a low level in patients with diabetes mellitus, especially type 2. This is probably connected with insufficient information or a lack of recognition of physical activity not only as a preventive but also as a therapeutic measure by patients and even physicians who are educating patients.

Based on all the mentioned above, physical activity assessment can be recommended as a routine measure for the evaluation of diabetes even at the time of establishing the diagnosis. Although we now lack national guides and a well-formulated training program, it is a fact that exercising under control by a physician and a trainer contributes to improvement of disease control, increases the quality of life and postpones the development of complications.


DEFENDING THE GOAL DURING A PENALTY

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Borivoj Dukić

e-mail: borivoj.dukic@hotmail.com

Summary: The relevance of defending a goal during a penalty is highlighted in this paper, as a defended goal or an achieved result is very often the final result of the match. The ninety or one hundred and twenty minutes of the game’s duration, many passes, shoots, duels, tactical-technical actions, and psychological and physical readiness can all come to nothing due to a penalty which can resolve the match. Based on this research, we can come to a valid conclusion that a goal can be defended if the goalkeeper is at ease prior to the carrying out of the shot. If the goalkeeper endeavors to assess where the ball will be directed rather than make an attempt to forecast or predict, there will be success in the ball hitting the objective. Objectively speaking, a ball which has been directed towards the part of the goal outside the arch which consists of the goalkeeper’s height with his hands extended, after a leap with both feet cannot be defended. There are exercises for training the goalkeeper, which can help a goalkeeper practice not to “move” ahead of the carried out kick.

Key words: penalty, shot, speed of motor reaction, assessment, forecasting.

INTRODUCTION

Research was conducted from August 9, 2000 to Sept. 21, 2002, on how a goalkeeper can be more successful in defending a goal, during a penalty. Some one thousand penalties were conducted in Serbian and foreign leagues, of all ages, at representational international matches – friendly matches, qualifications and meetings at championships (European, World and Olympic Games). Such a large number of registered penalties, where only the reactions of the goalkeepers during penalties are taken into consideration in the following situations: when he is at ease prior to the shot carried out, if he moves...
earlier with a step out or aside, or with both feet, forward, or to the side and the success or lack of it in defending the goal, clearly shows us what to do in working with goalkeepers.

The role of a goalkeeper in a team is very important, if not the most important. Due to this, this segment of the football game deserves more attention of all those who in this or another way participate in the match and the actions in the match itself.

It is possible to correct the error of every player by a set of tactics and by training the team well, but the error of the goalkeeper can be very obvious, as most often there is no room or time to correct the errors or blunders. If it is common knowledge that many matches are resolved by penalties, when the result is being resolved, one successfully carried out penalty is most often considered as normal. But if the goalkeeper is successful in catching or saving the shot, then he gives a great psychological stimulus to the entire team, while a team whose player was unsuccessful can psychologically burden all the players and then the morale is at its lowest point. The entire team is then vulnerable and in that moment vulnerable for defeat.

Many coaches have the habit of saying there is no such things as a good goalkeeper who is good enough to defend a penalty, just a bad executor. The research which was conducted refutes this claim.

THEORETICAL CONSIDERATIONS

Before we start considering some theoretical considerations which are closely linked with the reactions of goalkeepers, we should say something about the basic goalkeeper’s position. A good goalkeeper’s position is the one which enables the fastest reaction in all directions. In considering the basic goalkeeper’s position, we must start from the following knowledge: the hand is quicker than the foot, the upper arm is quicker than the lower arm, the calf faster than the thigh. The arm movement is quicker in the movement of arms to the side, then the arms in the front, followed by the arms positioned backwards, while the slowest movement is with the arms above the head. Foot movement is the quickest as a step forward, then the side step, and the slowest as a step back.

We talked about speed here. And what is speed?

There are several definitions of speed. One of them is the following: speed is the trait which characterizes a man with the ability to carry out movements or motor activities in the smallest period of time.
The parameters of speed are:

- the speed of the motor reaction
- the time of the individual movement
- movement frequency

According to the hitherto testing, it was shown that they appear together, but often separately as well.

The speed of the motor reaction is the time which passes from the beginning of the stimulus to the starting of the movement. It consists of the following parameters:

\[ t_1 + t_2 + t_3 + t_4 + t_5 = T \] – the speed of the motor reaction

- \( t_1 \) – appearance of stimuli in the receptor, depending on the irritability of the receptor and skill of concentration. Training can have an optimal impact on this receptor.
- \( t_2 \) – conveying the signal to the central nervous system. The size of this parameter is constant and training can have very little impact on it.
- \( t_3 \) – the flow of stimulation through the nerve center and the forming of an executive signal. This parameter can be positively impacted on, especially by improving the technique. With the goalkeeper – the technique of catching, repelling and boxing the ball.
- \( t_4 \) – moving of the signal to the central nervous system and to the muscle. This parameter is constant and training has no impact on it.
- \( t_5 \) – stimulating the muscles, change of tension, start of movement. This parameter is dependent on the strength of the muscles, contractibility of their fibers, coordination abilities and similar. It can be improved by training.

There are simple and complex reactions.

A simple reaction is a reaction to an action known in advance (starting signal for a race). A complex reaction is the reaction which should respond to an unexpected signal or action of another person (shot, dribbling). In the defense of a goal while carrying out a penalty, a complex reaction is evident. The time of a complex reaction can be shortened by training, the repetition method, at the same time also improving the speed reaction, and in the goalkeeper the success of defending a goal.

The time of individual movements depends on the size of the given space. In order to develop maximal speed, a perfect
synchronizing of the maximum speed of all the muscle groups is necessary, the groups which participate in the movement. The time of individual movement can be improved with training.

Movement frequency is determined in cycles in seconds and is most probably linked with the mobility of the nervous system. Movement frequency can be improved by training.

During the defense of the goal in the carrying out of a penalty, in order to catch or save the ball, the goalkeeper must do the following:

- watch the ball (fixate on it)
- assess the speed and the direction of the ball’s movement
- choose an action plan
- start carrying out a plan

The mentioned testifies of the significance of a continuous and tenacious training in order to improve the goalkeeping qualities. The most time is spent on fixating on the object (ball). Some 0.175-0.185 seconds are spent on hidden movement and fixating, and 0.03-0.01 seconds on the movement itself and convergence. A quick fixating on the ball improves the success of defending of the goal. Thus, both the goalkeeper and the other players must watch the ball.

In this research, the area of the goal has been divided into the following parts:

- The first arc consists of a radius of the height of the goalkeeper in the basic goalkeeper position.
- The second arc is the radius of the height of the body and the extended arms.
- The third arc is the radius of the height of the body and extended arms during a dive.

The area outside the third arc to the goalpost.

- The area of the goal is……………………………7.32 h 2.44 = 17.86 m
- The area of the first area is………………… r = 1.90 m is 5.67 m
- The area of the first ring is……………………………..3.37 m
- The area of the second ring is………………………………6.70 m
- The area of the goal outside the arc is………....…………2.12 m

\[\text{17.86 m}\]
The area of the first arc should be defended, if we take into consideration the speed of the motor reaction, almost 100%.

In the first ring, the success in defending the goal should be up to 50%.

In the second ring, the success of the defense could be around 20%.

The area outside the third arc is practically indefensible.

In the registered one thousand carried-out penalties, we have the following indicators:

- 122 balls were directed toward the first arc
- 106 balls were directed toward the first ring
- 294 balls were directed toward the second ring
- 412 balls were directed outside the arc in the goalpost and 66 balls outside the goal

Some 773 goals were achieved:

- 89 goals within the first arc
- 74 goals within the first ring
- 211 goals within the second ring
- 399 goals outside the arc

A total of 161 penalties were successfully defended (83 were caught, and 78 shots saved):

- 33 shots were defended in the first arc
- 32 shots in the first ring
- 83 shots in the second ring
- 13 shots outside the arc

When the goalkeeper was at ease prior to the carried-out shot, he defended 96 penalties.

- When the goalkeeper reacted with a step forward, he defended 36 penalties.
- When the goalkeeper reacted with a side step, he defended 12 penalties.
- When the goalkeeper reacted with a sidestep and a step forward at the same time, he successfully defended 17 penalties.
- In total, some 161 penalties were successfully defended.
When the goalkeeper was at ease before a shot, he reacted in the direction of the shot ball 227 times.

When the goalkeeper carried out a kick forward before the shot, he reacted towards the direction of the shot 86 times.

When the goalkeeper made a side step before the shot, he reacted towards the direction of the shot 47 times.

When the goalkeeper made both a step forward and a side step, he reacted towards the direction of the shot 61 times.

In total, he reacted 421 times.

The goalkeeper reacted 266 times in the direction of the ball, and 574 times away from the ball.

The goalkeeper reacted earlier:
• 390 times with a side step
• 602 times with a step forward
• was at ease before the kick 240 times

The action of the goalkeeper with a side step:
• away from the ball 115 times
• 50 times in the direction of the ball
• 13 shots defended

The action with a kick backwards:
• away from the ball 264 times
• 109 times in the direction of the ball
• 39 shots defended

Simultaneous action of the side step and a step backwards:
• away from the ball 169 times
• 63 times in the direction of the ball
• 15 shots defended

When the goalkeeper was at ease before the shot, he reacted away from the ball 13 times.

When the goalkeeper made a step backwards before the shot, he reacted away from the ball 286 times.
When the goalkeeper made a step forward before the shot, he reacted away from the ball 112 times.

When the goalkeeper made both a step backwards and forwards before the shot, he reacted away from the ball 172 times.

In total, he reacted away from the ball 579 times.

- When the goalkeeper was at ease before the kick, he received 126 goals.
- When the goalkeeper made a step backwards before the shot, he received 300 goals.
- When the goalkeeper made a step forwards before the shot, he received 141 goals.
- When the goalkeeper made both a step forwards and a step backwards before the shot, he received 206 goals.
- In total, he received 773 goals.

The actions of the goalkeeper when at ease (after the shot):

- Once with no action
- Caught the ball 100 times
- Started towards the ball 124 times
- Started away from the ball 15 times
- Defended 94 shots

In total, the goalkeeper made actions while at ease 334 times.

When the goalkeeper reacts with a side step or a step backwards, he “wastes” time during which the ball covers a certain distance, so that the goalkeeper has less time for an intervention, which is often just the time during which he is late to catch or save the ball. If the ball is caught on the side of foot, it is almost impossible for the goalkeeper to be successful.

The reacting of the goalkeeper 574 times away from the ball is the greatest failure for the coaching profession.

Of 122 directed shots in the first arc, 89 goals was received, and only 33 shots were defended.

Of the total defended 161 penalties, the goalkeeper was successful 94 times, when he reacted after the carried out shot. When he made a step too soon, he defended only 13 shots, and when he made a step backwards he defended 39 shots. When he reacted simultaneously with both the back step and the sidestep, he defended 15 shots.
CONCLUSION

The registered number can be scientifically valid, with the conclusion: the goalkeeper will be more successful in defending the penalties if he is at ease (makes not movement before the carried out shot).

At the defense of the goal during a penalty, the goalkeeper can make two mistakes. The first one is due to the fact that the goalkeeper does some forecasting, not assessing. These are two different concepts, which are often considered to be the same. The difference is in that forecasting is carried out based on the prior carried out action. For example, the player, the executor of the penalty, always kicks to one side, so that the goalkeeper starts to that side earlier, expecting that in that instance as well the player will carry out a penalty in the usual way. The movement of the goalkeeper, before the carried out shot, is the second error which he commits during a penalty.

With a side step or a step backwards made earlier by the goalkeeper, he “wastes” the time during which the ball passes a certain distance, so that the goalkeeper has less time for an intervention, which is often just the time for which he is late to catch or repel the ball. If the ball has been directed to the side of foot, it is almost impossible for the goalkeeper to be successful.

Ninety four defended penalties while at ease are the best indicators that penalties are best defended at ease, after a carried out shot. This kind of defense is best carried out by training.

We offer here one way of training a goalkeeper, on how to be at ease: the coach sets six balls at around 17 m from the goal. At 3 – 4 m behind every ball, there is one player. Everyone starts toward the ball at the same time, and the shot is carried out by only one of them, as previously agreed. The goalkeeper waits for the carrying out of the shot in order to react. When the coach sees that the goalkeeper is at ease every time after a shot carried out, he eliminates one player and one ball. Then he moves the ball for 1 – 2 m towards the goal and carries out the drill in the mentioned manner. He does this in the space of the penalty, when one player and one ball are in front of the goalkeeper.

This is done at many training sessions, in order for the goalkeeper to acquire the habit to react towards the ball each time after the carried out shot. Then his acquired reflex will be close to a conditional reflex. The following says the best about this kind of training, “a match is trained, not played.”
STATISTICAL DATA PROCESSING OF A THOUSAND CARRIED OUT PENALTIES

PARTS OF THE GOAL THE GOALKEEPER DEFENDS
1. THE FIRST ARC – AT THE GOALKEEPER’S HEIGHT
2. THE SECOND ARC, THE FIRST RING – THE HEIGHT OF THE EXTENDED ARMS
4. OUTSIDE THE ARC

SHOOTING INTO THE GOAL – 934 BALLS

SHOOTING OUTSIDE THE GOAL – 46 BALLS

DEFENDED – 161 BALLS

ACHIEVED – 773 GOALS

REACTION OF GOALKEEPER IN THE DIRECTION OF THE BALL – 421 TIMES

REACTION OF GOALKEEPER AWAY FROM THE BALL – 579 TIMES
REFERENCES


Summary: Identifying talent is a process of testing parameters with the greatest likelihood for success by which children are encouraged and stimulated to become involved with sports. Taken into account for the purpose of testing are those parameters which help to predict, with the greatest degree of probability, the future capacities of performing, considering the current level of maturity and preparedness of the child. The subject, as well as the aim of this paper, is to propose, based on previous professional and scientific findings as well as the current possibilities which exist in our football practice, an objective, valid, prognostically valuable, relatively simple and user-friendly (economic) battery of tests, in order to identify talented male football players aged from 12 to 14. Summing up the results of the prior research and recommendations of top experts in the area of discovering, identification, selection and development of football talents, the paper gives a proposal of an economical but multidimensional battery of tests to be used in the process of long-term assessment and following of young players of the pre-adolescent and early adolescent stage. The battery “covers” several different dimensions of football talent (from physical and physiological characteristics to psychological skills and skills specific for football), which have shown to be successful and reliable predictors of future football performances.

Key words: talent, identification, football, tests

INTRODUCTION

Talent is a word which is heard often in sports. It is used by athletes, sports coaches, parents, journalists, managers and others. However, it seems to be the general opinion that there is no need for talent to be specifically
explained, as it is par for the course that it specifies a high degree of natural abilities for sport.

There are several different definitions of talent. Jurgen Kozel (according to G. Stojanović, 2005) describes talent as “an extremely complex attribute; genetically determined, of a complex structure and prone to environmental conditions”. To be more precise, talent is the degree to which one person possesses certain physical, physiological or mental attributes which significantly contribute to success in a given sport. It is usually considered that it is not the individual with an average degree of attributes needed for success in some sport who is considered to be talented, but rather, the one who possesses these attributes to a degree above average has true talent.

It is without doubt that among children and youth there are always those who are said to have sports talent. But the key issue is how to discover talented individuals, to do this at the right moment and direct young people towards those sports in which their prospects for top achievements are the greatest. Thus, the major professional and scientific institutions which are involved with development and advancing sports in every country pay special attention to identifying talent.

Identifying talent is a process of testing chosen parameters which are used to encourage and stimulate children to be involved with sports in which they have the most likelihood for success. The parameters chosen for testing are those which can be the basis for predicting future capacities, by using the highest degree of probability and taking into consideration the current level of maturity and preparedness of the child.

Brian Grasso (2005) considers that the process of identifying talent is made up of three specific categories:

- **Identification of talent**
- **Selection of talent**
- **Development of talent**

Identifying talent helps to speed up the progressing of the chosen talented individuals to an elite level. Except for this, the procedure of identifying talent helps the training process to become more economical, rational, and efficient. Young people are happier and less frustrated, as they are in time directed towards sports which best suits their psychological nature and the specific abilities which they possess. But we must not forget that identifying talent, without a development program, would simply be a waste of time and resources.

Williams and Reilly (2000), Malina, R. (2006), Kluka, D. (2006), and the majority of other researches, when they speak about the recognizing and identifying of talent differ between the following concepts:
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a) Discovering talent
b) Identifying (recognizing) talent
c) Selecting talent
d) Development of talent

Discovering talent relates to the discovering of potential athletes, that is, individuals talented for sport but not necessarily involved in sports. Discovering talented individuals for football is not a vast problem, as football is a popular sport and played by a large number of young individuals. It is a very different situation with the so-called small sports where it is a problem to motivate children to become involved.

Identifying talent represents a process of recognizing the current participants (athletes) who have the potential to become top athletes. The essence of this process is to acknowledge those individuals who are especially talented for their sport, that is, who have certain traits which can make them elite players at an early stage. Of a vital importance for this process is the measuring of physical, physiological, psychological and social attributes, as well as technical abilities so that, based on the results of the measurements, the level of their performing as adults can be predicted.

Selecting talent includes a permanent process of identifying those individuals who have the levels of performing needed in order to be included into certain clubs, regional or national teams. Selection includes a choice of the appropriate (best) players or groups of players for carrying out tasks in a given moment (context).

The development of talent implies that appropriate conditions for studying and improving should be secured for talented individuals, so that they have the possibility to realize their sports potential. This is a systematic program of support and training within which talent identification can appear in various stages. Lately, leading researchers in the area of sports science have shifted their attention from discovering and identifying talents to a greater focus on the process of leading, developing and improving sports talent.

1. THE SUBJECT AND AIM OF THE PAPER

The subject, and at the same time also the aim of this paper, based on both the previous professional and scientific findings and the current possibilities which exist in Serbian football practice – is to propose an objective, valid, prognostically valuable, relatively simple and easy to apply (economical) battery of tests for identifying talented male football players aged between 12 and 14. Except for the fact that the complexity of the game of football demands a multidisciplinary approach, in order to choose a battery of tests for identifying football talent, the following must be taken into consideration:
a) Specific limits linked with the availability and access to the necessary measuring equipment and tests,

b) The expertise of the existing coaching staff,

c) The objectivity of the applied tests, their partiality in regards to success within the conditions of the game,

d) The simplicity of the procedure of imparting, carrying out and assessing, the possibility of a periodical imparting in the aim of following progress,

e) The motivational value of individual tests (their appeal and how much they motivate young athletes to give their maximum).

The battery of tests is intended for children of the early pre-adolescent age, as the characteristics which separate the gifted from the less talented players at this age are to some extent equated. They change significantly with athletes aged 15, 16 or older.

2. IDENTIFYING TALENT

It has been confirmed that a well planned-out and organized program of identifying and organizing a program of identification and development of talent is a key factor of successful development in every sport. Thus it is also in football. Programs for discovering children with talent for football, camps for young football talents and football schools are a common practice today in every first league professional club, as well as every regional and/or national football association. The advantage of discovering football talent early is great. The sooner the playing talent is recognized, the more time there is left to train the player better and prepare him for top playing achievements with the help of top rate coaches.

Williams and Reilly (2000) describe the identifying of talent in football as a process of recognizing those individuals who have the potential to become elite players. This is the predicting of a future performance based on measuring physical, physiological, psychological and sociological attributes, as well as technical abilities.

Regardless of the fact that in some countries there is a relatively simple, structured and systematical approach to identifying young people talented for sports, techniques and approaches are very different when football is concerned. If we analyze professional periodicals from the area of identifying talent in football, we can see great differences in methods of identification, as well as the parameters which are assessed and considered to be significant predictors of future football success.
2.1 Previous research

Sports science has always dedicated significant attention to discovering, identifying, selecting and development of talent. Such an interest has been dictated by sports practice, seeking responses to numerous questions: What makes an athlete a champion? Can future champions in some sport be discovered at an early age? What is sports talent? Is sports talent inherited or developed? Are there reliable predictors of top sports performance? Also, can a universal model of identifying talent in sport in general be determined, or does every sport demand the determining of a specific model for that particular sport? To what extent can the process of identifying talent in sports be objective and reliable? Is identifying and developing talent in the interest of every country and why? Are there successful models of identifying and developing talent? Is developing and identifying sports talent in the national interest of every country?

For more than three decades, researchers have been trying to give answers to the mentioned questions, as well as many others. However, we can only reliably conclude that there are no clear, complete and final answers. Regardless of the fact that in the 70s of the last decade, the process of identifying talent includes a scientific approach, in many countries that process occurred and is still occurring inadvertently, spontaneously, without a pre-determined system of measuring and control. Regarding the systems of identifying talent, Kluka (2006) considers that they can be classified into three groups:

1. Systematic government systems (approaches) – They existed in the countries of the former Soviet bloc and China and were created by sports experts from leading scientific institutions of the given countries.

2. Systematic non-governmental systems – These systems existed in several countries, and were especially distinctive for tennis and swimming. They included well structured programs for various age groups and a developed microstructure of identification and stimulating talents via a pre-determined system.

3. Non-systematic approaches – These are to a certain extent systems for identifying talent without a specially formed approach. Talent has been discovered at PE classes (by teachers), in clubs (by coaches) or in some other way, but there was no defined system for their further development and following.

It should be mentioned that, according to the opinion of the majority of contemporary sports scientists, the former German Democratic Republic (or DDR) had the most systematic model for identifying and developing sports talents. The program of discovering talents which existed in this country represented the main pillar of its success on the international sports scene. This success was especially visible in individual sports such as athletics, swimming, boxing, etc. Recently, preparing for the Summer Olympic Games in 2000,
Australia had incorporated in its system of identifying and developing talents (TID) many elements and positive experiences from the eastern German system. According to the approach of building a quality system of identification and development of talent, Australia was additionally motivated by the fact that among the five leading sports nations (the US, Russia, China, Germany) it has the least number of young athletes aged 10-14. While China has approximately around 120 million young athletes aged 10-14, this number in Australia is a mere 1.3 million. Thus, Australia, far more than China, depends on a systematic approach to identifying talent. Thus, this process must be economical, scientifically based and successful. As Germany after the reunification did not have available the eastern German system for identifying talent, there was a steady decline in the number of medals won at the last three Olympic Games (1992 - 10.6%; 1996 – 7.4%, and 2000 – 5.4%), but Australia noted a constant growth with the help of the new TID system (3.2%; 4.1%; 6.3%: Rutten & Zeimainz, 2004 – according to Kluka 2006).

2.1.1 The structure of talent for football

Not willing to wait for a harmonizing of opinions at the state level and for a scientifically funded system for identifying talent to be established, large professional football clubs have for years been developing their own systems (ways) of detecting and developing talent. Most often they leave the detecting and identifying of talent to experienced scouts and coaches. Frequently, they sum up their vast experience in seeking future football champions into acronyms which reflect their comprehension of the key determinants of future success. For example, the football club Ajax from Amsterdam used, for scouting young talents, the acronym TIPS: technique, intelligence, personality and speed. The alternative lists include TABS (technique, attitude, balance and speed) and SUPS (speed, understanding, personality, skill). Even though assessments of football talent such as these are not scientifically based, they nevertheless give basic guidelines on the physical, motor, technical skills and abilities, as well as personality factors relevant for success in the sport of football.

The latest research of a team of Japanese experts (Nishijama et al. 2001) has also been involved with the assessment of the structure of football talent of young players by licensed football coaches. A total of 243 football coaches assessed the importance of individual indicators in six areas of football talent with 504 young players, and of various competitive levels: body build, physical and motor abilities (12 items); individual motor skills (12 items); individual tactical skills (11 items); trainability; intelligence and personality. The results of quality and factor analysis have shown that the structure of football talent of youth, according to the assessment of a coach, is made up of four main factors:
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- The factor of physical and motor abilities (speed, endurance, strength, agility, coordination);
- The factor of individual motor skills (dribbling, passing, receiving the ball, physical contact, taking the ball) and
- The factor of individual tactical skills (the speed of assessment and decision-making, offensive skills, defensive skills and understanding of tactics).

In order to determine the basic components of football talent, researchers most often measure the anthropometric, physiological (functional), physical, motor and psychological characteristics of young football players of a different calendar and/or biological age, a different level of competition and of mastery. The aim of these measurements was to determine according to which factors young players of different levels of success differ and whether they can be reliable predictors of their further sports development. Such research was at the beginning mostly one-dimensional (only one or two areas were assessed). Contemporary research is multidimensional and multivariable, due to the fact that it respects the fact that football talent is of a very complex nature and cannot be recognized just based on an intuitive assessment of experienced coaches, or by measuring only the anthropometric or some other individual characteristics, but rather, demands the analysis of multiple physical, physiological, motor, environmental, social and psychological factors.

The majority of contemporary sports researchers agree that identifying talent in football and other team sports is more complex than in individual sports such as rowing, cycling, athletics, gymnastics (Reilly et al., 2000; Williams and Reilly, 2000; Hoare, D. and Warr, C., 2000; Vaeyens, R. et al., 2006; Malina, R. et al, 2007). They stress that talent in the mentioned individual sports is successfully linked with anthropometric, physiological and motor attributes. In the case of football, also relevant are factors such as sense of play, game intelligence (understanding tactics, speed of assessment and decision-making), team factors (coherence, cohesiveness), sociological factors (family, quality and conditions of training), etc.

After an extensive review of the literature research in which the psychological characteristics of young football players of different ages were determined, as well as competition levels (success) and/or levels of skill, Morris, T. (2000) concluded that there is no agreement among them in regards to the predictive value of individual psychological attributes. This is also partly conditioned by the application of various psychological tests of which some are insufficiently valid and reliable, as measurements are often carried out on adult elite football players, and the determined psychological profiles are used as criteria for identifying young talents players aged from 12, 14 or 15. It is clear that psychological characteristics of adult football players cannot
be expected from talented young players. There is still no response whether the same psychological traits lead do success in young and senior players, or if they remain stable in the period from adolescence to adulthood, having in mind that adolescence is the period of the most intensive psychological development and maturity. According to Morris, transversal research of samples of adult football players cannot be used for identifying talent in adolescents. Young football players should be secured training of psychological skills, and psychological researches ought to be more comprehensive and sophisticated. Thus, he recommends longitudinal or quasi-longitudinal research in order to determine whether the same psychological variables are important for top performances through the process of development and whether the psychological variables measured during adolescence can predict an extraordinary performance in adulthood.

By reviewing the research of the perceptive skills of football players, Williams (2000) concluded that successful players differ significantly from less successful ones, according to their abilities. They more successfully recall and recognize game patterns, that is, they differ by ability to decipher, make out and recognize for sports specific information, and based on these early signals to successfully anticipate the further course of events in the field. Also, among the successful and less successful football players, differences were noted also in the strategies of a visual researching of the field and in eye movements, which depend on whether they are watching the entire field (11 on 11 players) or certain micro-situations of the game (1 on 1, 3 on 3). He concluded that perceptive abilities which are usually linked with the nature of players' long-term memory are of a crucial relevance for their ability of spatial or event anticipation in the game, and that they should be trained through special programs and used for indicators of potential talent in football.

It is interesting to mention the results of the study by Falk and associates, even though it was carried out on young water polo players. A generalization is possible, as it concerns a team sport in which, as in football, it is of a special relevance to assess the sense or feeling for a game. Testing the variables which can help in the process of selecting young water polo players for further top results in this sport, Falk and associates (2004) discovered that game intelligence, along with the majority of swimming tasks and the ability of dribbling, represented one of the most important predictors of further progress. Thus they recommend that in the process of selecting young water polo players, swimming variables are used less, and a larger stress is put on the assessment of their game intelligence.

In their multidisciplinary approach to the identification of talent in football, Reilly and assoc. (2000) measured on a sample of 16 elite and 15 sub-elite young English football players of an average age of 16.4, some 15 anthropometric, 8 physiological, 3 psychological and 2 specific football variables.
a multivariable analysis, they determined that the most discriminating of all measures were the following: agility, the time for the 30 m sprint, ego orientation (a smaller ego orientation, a stressed task orientation, mastery, quality) and the ability of anticipation in a 1 on 1 situation. Elite players were also significantly lighter in weight, and they had a larger aerobic ability and were more tolerant to fatigue. They were also better in dribbling, but not in shooting. Thus, it was concluded that the battery of tests can be successfully used in the aim of selecting young players for specialized development programs aimed at talented players of football. The approach to identifying talent in football must be multivariable, i.e. the battery of tests must include anthropometric, psychological and psychological measures.

R. Malina (2006) also agreed with this assessment, adding that the following traits are relevant for football:

- **Physical** – size, musculature, body composition
- **Physiological** – aerobic, anaerobic, speed, strength
- **Specific skills for sport** – ball control, dribbling, passing, shooting
- **Perceptive-cognitive skills** – anticipation, visual scanning, recognizing of game patterns
- **Psychological skills** – skills of contest, motivation, attention
- **“Game intelligence”**

A group of researchers headed by Vaeyens R. and Malina R. (2006) started a five-year project in Ghent with the aim to determine a model for selecting young football players in Belgium. Once a year, during five consecutive years, they tested anthropometric characteristics (height, weight, 11 skin folds, 2 diameters), functional abilities (strength, aerobic endurance, anaerobic capacity), specific football skills (slalom dribbling, lob passing, precision of shooting, juggling) and the biological maturity of young players. Except the fact that the players aged 12-16 were divided into four age groups: 13 years, n = 117; 14 years, n = 136; 15 years, n = 138; 16 years, n = 99, they were also divided, according to the quality of their performance and competition level, into 3 groups: elite, sub elite and non-elite. For all players, a biological, i.e. skeletal maturity was determined, and the difference between the chronological and skeletal age was used as a covariant in the analysis, as the boys of an accelerated biological age (accelerants) generally speaking had a better performance than the boys whose chronological and biological age coincided (normal), or those whose biological age was delayed (retardants). Using the multivariable analysis methods, the authors determined that identifying talent in team sports such as football is complex and thus demands a multivariable approach. The assessment of young players becomes more complex due to individual differences in the speed of growth, in functional abilities and motor skills during puberty.
Discriminatory factors among young players varied in accordance with time and the pace of adolescent growth. The status of maturity (i.e. the difference between the skeletal and chronological age) significantly impacted anthropometric traits in all competition groups (elite, sub elite, non-elite). Biological maturity also significantly impacted strength, capacity and flexibility of players of 14 and 15 years of age, as well as the speed of the sprint and the cardio-respiratory endurance of 15 and 16-year-old players. However, biological maturity significantly impacted specific football skills only with 14-year old players. This study has shown that elite and non-elite young football players significantly differ according to functional abilities and specific football skills (lobbying, dribbling, juggling). Speed and football technique were significantly discriminated traits with 13 and 14-year-old players, while aerobic endurance was much more important with 15 and 16-year-old players. Strength and endurance of the torso, adiposities (the sum of skin folds), speed (the sprint circuit and a 30 m flying start) and dribbling were also important discriminating factors with 15-year-old players. Thus, speed showed itself to be a separating factor between competitive levels in the framework of all four age groups, as elite players in each group had better sprinter abilities, while the differences were the most obvious with players aged 13 and 14. Thus, the authors concluded that the identifying and developing of talent in football represents a dynamic process and must take into consideration different abilities of youth which differ according to the speed of maturation and development.

The mentioned studies show that the identification and development of talent in football and other team sports becomes more complex due to significant variations in growth and maturity (especially during younger puberty), due to the fact that the traits which positively discriminate the gifted from the less talented change depending on the age of the players, as well as due to the influence of other variables which are hard to quantify and control (sense for the game, game intelligence, team coherence, access to a quality training process, etc.), but also due to the fact that quantitative measures of ability (the most often applied batteries of tests) do not carry out the evaluating of football players younger than 10 years of age well. Having this in mind, Tom Turner, OYSAN Director of Coaching and Player Development, suggested that with 9 and 10-year-old players and younger, the assessing of talent is not carried out based on the effect on the tests of individual skills, but on the basis of following and observing their behavior during a real game. He considers that assessing the strength and weaknesses of players in authentic circumstances not only secures the information which player can “in fact” play football, but also gives coaches the possibility to determine those domains which are missing or are a hindrance to good performance and further progress. For observing players younger than 10, Turner suggests matches 2 on 2, 2 on 2 +1, 3 on 3, 3 on 3 +1, 4 on 4 and 5 on 5. For assessing 9 and 10-year-old players, the best option is
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competing 5 on 5, while for players older than 10 years of age, matches 8 on 8 and 11 on 11 should be used to complement observing matches 5 on 5.

Considering that players younger than 10 have no developed feeling for group tactics, Turner considers that during the evaluation of their football talent, coaches who are observing them during a “live game” should focus on individual techniques and tactical domains and questions such as: Does the player understand which is the aim of the attack, and which of the defense? Does he have a formed sense of the football direction? Does the player try and succeed to control the ball? Is the player relaxed when he is dribbling the ball? Does the player attempt to use different areas when he is leading or shooting the ball? Does the player use both feet? Does the player attack an open space? Does the player possess technical skills to beat the opponent and keep the ball? Does the player move and enter the open space to receive the pass? Does the player move naturally in accordance with the game, or does he kick the ball and remain standing? Does the player give goals? Does the player move in accordance with the game, or does he kick the ball and remain standing? Does the player attempt to regain the ball when it is in the possession of the other team?

For an assessment of players older than 10 years of age, Turner recommends another 12 criteria, along with the mentioned. Some of them relate to the understanding of the arrangement in the field, mobility during the game, the ease of shifting from attack to defense, the way of scanning the field, the speed of the game, decision-making and anticipation, individual defense skills, group defense skills (how a player helps his co-players and the team), physical qualities, psychological qualities (coachability, competitiveness, intrinsic motivation, competition orientation, sports aims, other interests), etc.

Not to be forgotten are the newest approaches to identifying talent and top sports performance which use genetically based technologies. In his discussion of the role of genes in identifying talent in sports, Brad McGregor (2006) mentions a series of different research papers in which he assesses the degree of inheriting certain anthropometric and physiological traits important for top sports performances. This research once again stirred up the old debate on the contribution of the factor of inheritance versus the factors of environment and nurture. Some researchers believe that there is such as a thing as a “sports gene” and that it can contribute to predicting talent already at an early age. However, this theory is not dependable, as Perusse and assoc. at the end of 2002 (according to McGregor, in 2006) identified 90 different genes which make up the human genetic map for performing.

When we consider the use of gene technology in identifying talent, then we usually speak about the degree to which physical abilities and physiological traits are determined by genetic make up. Aerobic performing and VO2max
in literature are mentioned as traits which are highly genetically determined. However, it must not be forgotten that the assessment of their innateness shifted from 90% in the 1970s to a current 50% (Hohmann and Seidel, 2003 – according to McGregor, 2006). Similarly, Patel and Greydanus (2002 – according to McGregor, in 2006) point out that the heart structure of the individual and his response to cardio-pulmonary exercising are genetically determined from 30-70%. Some researchers (for example Hopkins, 2001) contend that the total contribution of genetic factors on performance is about 50% and as much as that on variations in the response of the individual to training. Nevertheless, this opinion of 50:50 is not shared by everyone, quoting the argument that, for example, height is 80% a genetically determined trait. Even though genetic research in the area of sports is only starting, today there are ACTN3 sports gene tests of genes found in quick muscle fibers. Companies which carry out the ACTN3 gene tests claim that they can give an insight into the choice of the most appropriate sport and competitions in which the best results can be achieved. Regardless of these facts, the majority of experts consider that it is rather naïve to use only one gene as a guideline for a choice of sport and competition level, having in mind not only the complex interaction between genes, but also between genetics and the environment.

Genetic research can also be used for individualizing training programs in order for them to match the genotype of every individual. In some clubs, DNA testing is already being done of those genes linked with training. Thus, Manly Sea Eagles rugby league teams (Dennis, 2005 – according to McGregor, 2006) test their players for 11 genes linked with performance in order to create training programs which are adapted to their genotypes. But, there are only 11 of 90 identified genes which impact performance and knowledge of them cannot give full information for an adequate designing of training programs. In the conclusion of his research study on using gene technology in the process of identifying talent, McGregor stresses that these technologies are useful and that gene research will undoubtedly become a part of sports. A series of ethical and other issues linked with their implementing and control remain to be addressed.

Gapon, T. (2005) stresses that, among hundreds of diverse factors which are mentioned as determinants of success in football, the following eight can be separated as those consistently mentioned by coaches, football scouts, sports psychologists and others:

Strategies of visual investigation – perceptive abilities

- Making decisions
- Anticipation
- Motivational orientation
- Shooting
• **Dribbling**
• **Aerobic ability**
• **Anaerobic ability**

These eight traits can be grouped into three specific categories: psychological, physiological and abilities specific for football. Among football experts, the opinion prevails that most important are those factors which relate to the performing of specific football skills. Thus Reilly and Holmes (Gopon T., 2005) stress that for the assessment of skill, the following three components are key: **shooting, ball control and dribbling**.

Even though the subject matter of this paper are those abilities of children which can be called specific football skills and which football coaches can relatively simply, sufficiently trustworthy and objectively assess with the help of their associates, a short description of those abilities which are considered to be the basic psychological and physiological components of success in football follows.

**Dribbling** is the act of moving the ball with the feet towards the free space, dodging the defense players.

**Controlling the ball** is the act of controlling the speed and direction of ball movement during dribbling, receiving and shooting, which is the act of shooting the ball with the foot towards the goal.

There are several methods for assessing the control of the ball and dribbling, but **slalom dribbling** is the most popular. Slalom dribbling is a zigzag dribbling with the ball around the skittles from the starting point to the goal line and back. The aim of this exercise is to carry out the task quickly (as time is measured) and efficiently (as the player is punished for each skittle knocked down).

The assessment of the skill of **shooting** demands that the football player shoots the ball from a distance of about nine meters towards the targets which are set within the goal. The player has at his disposal as many balls as there are targets.

Points are awarded for every scored target. For the assessment of individual techniques in football, especially important are the following cognitive characteristics: **making decisions, anticipation and perceptive abilities**.

**Making decisions** in football is the process of thinking about certain actions such as dribbling, passing or shooting, and their executing. Williams A. M. (according to Gopon, T. 2005) considers that youth aged from 7 to 9 can be distinguished as more or less skilled football players, based on their abilities to make decisions.

**Anticipation** represents the ability of predicting (some call it an instinct as well) where co-players or opposing players will kick the ball, or in
which direction they will run. The ability to read the game and anticipate the intentions of the opponent is an important characteristic of a football player with talent.

During the testing of the abilities of anticipation and making decisions in football players, their eye movements are carefully monitored and analyzed. Eye movements are decisive for recognizing, analysis and interpreting visual information, such as the position of defense players or the potential free space zones. Eye movements, i.e. strategies of visual investigation are the key to good decision-making and anticipation, and are defined as perceptive abilities.

Identifying talent in football also includes the psychological profile of players, that is, the recognizing and analysis of the characteristics of their personalities which impact (alleviating or aggravating) learning, training and competing. For a football player, motivational orientation in a game represents his most important psychological trait. Morris stresses that motivational orientation can be directed towards the task (task-orientation), or the result (ego orientation). The player oriented towards the task plays football out of love, because he loves the game for itself, and wishes to learn more and improve his skills. Ego-oriented players play football in order to raise the level of their self-respect, promote their social status, and affirm themselves through winning. Also, coaches seek those players who have self-control in situations of stress and pressure, who have control over their attention, have self-confidence and are able to confront the distractors who impair their performance.

The assessment of physiological parameters represents an important component of identifying football talent. While football experts in some countries, such as France and Denmark, consider that physiological traits of younger players should not be awarded much attention, in the US it is believed that it is aerobic and anaerobic abilities which are key.

Aerobic ability, according to Sutton (Gopon, 2005), is the ability of an athlete’s large group of muscles to produce a maximum intake of oxygen and maintain its flow through the muscles in order to continue with the hard effort. Aerobic ability is the integral component of football ability, as by way of the football match the domination of the movement of players is evident: creating a space for the co-players, following the opponent by running and checking him during passing. Usually the VO2 sub. max. test is used to assess the aerobic abilities of the athlete.

Anaerobic capacity is the ability of the athlete to work at maximum capacity in short time periods and to minimize the amount of lactic acid which is produced when the anaerobic threshold is reached, that is, an insufficient level of oxygen which is at the disposal of the muscles which are working. Anaerobic ability is also an integral part of football movement during the match. For example, when the player jumps on the ball to headbutt it, he must
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be able in a very short period to accelerate the upwards movements of his body. Due to this, Sutton believes that a vertical jump represents the simplest and most efficient test for assessing the anaerobic abilities of football players.

Though the opinions of experts on when to start discovering and identifying football talent differ, most often they mention the period from 9-12 years of age. Aleksić V. and Janković S. (2006) claim that the initial selection in football occurs from the second to the sixth grade of elementary school (or from 8 do 10 years of age), yet tests are not used for this, but rather, for a subjective assessment of “situational intelligence, that is the speed of orientation in various situations in the game, then the level of speed-strength abilities, techniques, will traits, that is effort, self-confidence, aggression...” (Aleksić, V., Janković, S. 2006, p. 365). Already in the second stage of selection, which the mentioned authors call selection in the process of training, can be started with the application of tests which discover potentially talented football players and which measures the abilities of children of that age, but of course not in that degree of development.

3. THE MOST FREQUENTLY APPLIED BATTERIES OF TESTS FOR IDENTIFYING CHILDREN TALENTED FOR FOOTBALL

By reviewing the mentioned and other research studies dedicated to discovering, identifying, selecting or developing talent in football or similar team sports (especially the studies by Reilly and assoc., Gapona, Malina and assoc., Vaeyens and assoc., Frankl D., Williams A.), there is the conclusion that the most frequently used batteries of tests for the assessment of football talent of players aged from 12-14 usually cover the following domains:

1. Physical traits or anthropometric profile – somatotype: It is assessed based on the measurements of the body dimensions (height, weight, skin folds, diameters, extremities volume).

2. Status of maturity – correlation between calendar and skeletal age (biological age).

3. Physiological profile or functional ability: - Anaerobic abilities:
   a) 505 agility test
   b) 30 m sprint
   c) T-Test (speed & agility)
   d) Repeated sprints or speed endurance (300 m running divided into 5 series of 10, 20, 30, 40 and 50 m sprint circuits)
   e) Standing high jump (explosive strength).
A physiological profile usually does not include even one test of aerobic endurance, as that ability separates the players according to football success starting from age 15.

4. Skills specific for football:
   a) Dribbling test
   b) Passing/stopping test
   c) Shooting test

5. Psychological profile
   a) Motivational orientation (Ego orientation or task orientation; measured by the TEOSQ questionnaire, Duda, 1989);
   b) Test of sports competitive anxiety (SCAT, Martens, 1975);
   c) Test of psychological skills of strain (ACSI, Smith et al, 1994)

The test has been adapted for application in this country by the Republic Institute for Sport (Bačanac, 2005) and there are still no existing standards for it.

6. Perceptive-cognitive skills

There are no specific tests aimed at the assessment of the so-called “game intelligence” to measure cognitive abilities and performing football techniques and tactics which significantly determine success in learning (it is debatable whether this kind of ability exists at all), but different authors manage in various ways and mostly use some tests from the area of spatial-perceptive factors (for example, tests of perceptive identification, education of spatial relations, etc.) and at least one test of general intellectual ability.

For the assessment of perceptive cognitive skills, only a few authors use tests of anticipation, visual investigation and recognizing games patterns, while the others avoid them, as they are very complex and demand specially trained players, psychologists and other experts who would create them to satisfy all the criteria. For example, for the test of anticipation, it is necessary to prepare video clips which present simulations of games 1 on 1, 3 on 3, 6 on 6, and 11 on 11. Usually these tests contain 30 or so video clips, and from the football players it is requested to anticipate the direction of the opponent’s dribbling, pass, running, etc. It is a similar situation with the abilities for “reading the game” for whose measuring many skills and knowledge are needed, as for such a complex skill it is not easy to construe a good, objective, discriminatory and valid test.
4. A PROPOSAL OF A BATTERY OF TESTS FOR THE ASSESSMENT OF FOOTBALL TALENT OF CHILDREN 12-14 YEARS OF AGE

Having in view the results of the previous research of children talented for football (which tests were used the most and which have the best prognostic value) on one hand, as well as the state of Serbian sports practice on the other hand (availability and access to certain tests, the complexity and economical nature of the measuring procedure, the expertise of the staff which would carry out the measuring, etc.), we propose a battery of tests for the assessment of football talent with players aged 12-14. This battery should not be huge, but easily applicable, economical and simple to use. At the same time, tests should cover all the relevant areas of football talent, should be prognostically valuable, objective, practical for repeated application (retesting, monitoring) and interesting (motivating) for the participants.

The battery of tests for the assessment of football talent for our players aged 12-14 is made up of the following tests:

**Physical traits or anthropometric profile**
Assessed based on the measuring of body dimensions:
- Body height
- Body mass

**Physiological profile or functional abilities – anaerobic abilities:**
- 505 Agility test
- 30m sprint
- T-Test (speed&agility)
- Test of speed agility (300 m running divided into 5 series of 10, 20, 30, 40, 50m sprint circuits)
- Vertical high jump (explosive strength)

**Tests of skills specific for football:**
- Dribbling
- Passing/stopping
- Shooting

**Tests of a psychological profile or cognitive abilities**
The choice is left to the assessment of experts (coaches and psychologists).
5. CONCLUSION

As has already been emphasized, identifying talent represents an integral part and the initial step in creating future top football players. Identifying talent enables the training process to be more economical (cost-effective) and efficient, in such a way that only the talented players will be given the most optimal conditions for work and progress. Thus, valuable time and resources will not be used up on non-talented or insufficiently talented individuals.

For the process of assessing football talents to be even more objective, it is necessary for it to be scientifically based and above all, multidisciplinary. The complexity of football talent and the fact that the factors which separate the gifted from the less talented players vary depending on the time and pace of their adolescent growth and maturing, demands that the process of identification is systematic, dynamic, multidimensional and longitudinal.

Research results have shown that by measuring just one domain (physical, anthropometric, physiological, and psychological or some other) the future levels of competitive performances of adult football players cannot successfully be predicted. Thus it is necessary for the battery of tests for assessing football talent in young players to contain those tests which measure their physical and physiological traits, biological maturity, skills specific for football, psychological traits and skills of fighting, as well as perceptive cognitive skills.

By way of longitudinal measuring and monitoring of various dimensions of football talent, the prognostic value of the chosen battery of tests will increase and thus the percentage of wrongly identified and/or wrongly rejected talents will decrease. This is due to a weak predictive value of the applied tests, or due to the overlooking of the fact that some especially talented players mature later and thus their talent can be identified only at a later calendar age.

Summing up the results of the previous research and recommendations of top experts in the domain of discovering, identifying, selecting and developing football talent, the study gives a proposal of an economical but multidimensional battery of tests to be used in the process of long-term assessment and monitoring of young players of the pre-puberty and early puberty ages. The battery “covers” several different dimensions of football talent (from physical and physiological traits to psychological skills and skills specific for football), which have shown to be successful and reliable predictors of future football performances. At the same time, we have attempted to make the chosen tests relatively simple for application, appropriate for long-term consecutive measuring and already in possession of the endorsed metric characteristics.

During the application of these or similar batteries of tests intended for the identification of sports talents, one should have in mind that the quality of the training program in which potential sports talents are included has a significant impact on its efficiency (prognostic value). For, the identifying of talent
is only one step in a very complex and responsible process of discovering, developing, directing and selecting of young people who possess the potential for future or current top performances. In that process, equal attention must be paid not only to the development of specific football skills, physical and physiological abilities, but also psychological traits and skills without which not one, however talented, individual can become a top football player.

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THE SIGNIFICANCE OF COMPETITIVE ANALYSIS IN IMPROVING THE RESULTS OF SWIMMERS

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Vladan Marković
College of Sports and Health, Belgrade, Serbia
e-mail: zlatnidelfin@sbb.rs

Summary: Swimming as a sport is very popular, which is reflected by the fact that over 100 countries participate in the Olympic Games. In Serbia, swimming results are slacking in regards to the trend of overall growth in the world, except for some talents which are on par with the world elite. The reasons for this are well known: 1. a lack of conditions (functional Olympic swimming pools), 2. not enough expert coaches 3. insufficient financial means for top player programs, etc. Swimming results are conditioned by a combination of different factors: a) existing physical and functional preparedness, b) swimming technique, c) psychological preparations, d) tactical preparations, e) external conditions at the competitions, swimwear, the timing method, etc. A competitive analysis of the competition helps the swimmers and coaches to consider each race according to the so-called race segments. Contemporary methodology enables collecting data of the relevant competition parameters (for each race), an authentic registering of results of the tested parameters and their adequate analysis and processing (for each race and swimmer). This analysis represents an ideal possibility to correct errors and give suggestions on how to amend flaws as a tactical preparation for performance is developed and improved in the training process. During that process, both trainers and swimmers have the possibility to choose the most efficient preparation for performing at the race.

Key words: competition analysis, swimming events, sports selection, swimming technique, start phase, turn time, stroke length, stroke rate, swimming strategic

INTRODUCTION

Sports achievements show a continuous improving of results in all age categories of sportsmen and at all levels of competition, and thus the question is imposed: what is the limit of man’s motor abilities? This constant progress
in sports results has also been conditioned by the progressing of scientific research, researching new scientific findings in various areas, increasing international competition at large competitions and achieving better results (due to improving work conditions, training methods, technical sports achievements, the popularizing of sports and sports competitions with the young population and their inclusion in the systematic training process).

Top sports in the last few decades records a great leap in quality and quantity. This trend is not accidental, but rather a consequence of a close cooperation of kinesiology with other scientific and technical findings. Along with kinesiological parameters, other factors are also in play, such as the following: morphological, motor, functional and psychological.

Success in all sports events, including in swimming, depends on a series of connected factors such as: biomotor abilities, cognitive and conative functions, motivational structure, pedagogic processes of training, optimal and long-term conducted training sessions, appropriate anthropometric dimensions, i.e. morphological structures and build. Many other factors, whose effect is present but not so easily quantified, such as the effect of specific weight, the arrangement of centers of gravity and thrust, as well as anthropometric values (height, extremity length, joint mobility, muscle mass arrangement) and vital capacity, also affect success in swimming.

The factors which impact swimmers’ results can be the following:

- The existing physical and functional preparedness, (the optimal state of preparedness - sports fitness),
- Swimming technique (an efficient swimming style),
- Psychological preparation (of a motivationally prepared and psychologically stable athlete),
- Tactical preparations (for positioning strength in the most rational way during the race and using potential, as well as analyzing the kinetic parameters in a race),
- The external conditions in a competition, swimwear, the timing method, etc.

The mentioned criteria impact the result in various proportions, depending on the individual (psycho-physical) abilities of swimmers.

Also improved are the socio-economical conditions which impact a better preparedness of athletes in the conditional, technical and tactical sense of the word, the change in training conditions, while the methods and means of training word are refined, and a constant controlling and selection is carried out. All this shows that there is a continual seeking of new possibilities in the aim of achieving better results and records.
The achieving of top sports results in swimming is directly dependent on the length of sports experience (according to some Russian and Australian coaches, a period from 8-10 years is necessary to reach top results).

Nevertheless, a premature directing of the training process towards top sports results leads to early results (in a certain age category) and can have a negative impact on the length of sports experience (the Serbian syndrome). An untimely insisting on sports results and the liability for a constant improving of results, especially during the period of stabilization (with accelerated growth at 14 years of age with girls, and 16 with boys, while with decelerated growth at 16 with young women, and 18 with young men) can lead to saturation and a premature leave-taking from swimming. Every coach and parent should be familiar with the fact that this is a factor which can have a great impact on the career of a swimmer, and thus help to have control on inflated ambitions which can be limiting and have a negative impact on the sports development of a young swimmer.

The problems of developing top swimming in Serbia

Swimming results in Serbia have not progressed to the same degree as in some countries of Europe and the world (America, Australia, China, Italy, Hungary, Slovenia) and there are several causes for this state of results in Serbia:

1. A lack of a larger number of closed swimming pools in settings intended for competitive swimming,
2. An inadequately massive swimming base of unsatisfactory quality,
3. A short supply of superior senior swimmers,
4. Insufficient financial support of the Association and clubs for creating top players,
5. An inadequate number of expert coaching staff, as well as other staff necessary for a top athlete’s team,
6. Inadequate directing of children and youth through school and recreational sports towards swimming, etc.

A confirmation of the given state of swimming in Serbia is corroborated by a comment made by Serbian swim superstar Milorad Mike Čavić, who lives and trains in the US and Italy, that, after winning the silver Olympic medal at the Olympic Games in Peking and several months spent in training at Serbian swimming pools there are no conditions nor any expertise for top results and that it is necessary to change this as quickly as possible in order to make it possible for more young talents to appear, to take over from him and other Serbian Olympic Games participants.
A competitive analysis of swimmers

The need for a more detailed analysis of swimming races has been increasing with the popularity and improvement of the quality of swimming and in the aim of achieving better results (in increasingly relentless competition), state-of-the-art technology has had to be used.

Electronic measuring instruments give information on lap times (at each swimming pool length) and measure the final time. “Lap times” have always been useful for swimmers (as well as for clued-in spectators) for the purpose of following the race better. Nevertheless, the majority of technical elements which mark the race are “hidden” and it is obvious that there is a need for a more detailed competitive analysis. These statistical analyses plainly show in which parts of the race and in which elements some swimmers outdo others. The printed-out analysis of this report, along with the final and the lap times, also contains the following: the time of the start, the turn, pure swimming, the finish, the analysis of the swimming style by means of length, frequency and number of strokes.

During the last 15 years, a competitive analysis has become a regular analytical procedure at each race.

The purpose of a competitive analysis is to provide for the coach and the swimmer clear and detailed contents of each race. It shows in which parts of the race and in which parameters some swimmers are better than others. The reasons for coaches of top swimmers to use these analyses are the following:

1. To research and later on to progressively improve the competitive model of the swimmer,
2. To identify (with an analysis of the parameters in race stages) and correct weaknesses in the competitive performance (by improving the technique, its elements and tactics of the race),
3. To compare parameters between swimmers in the race, swimming competitions and competitors, which are competing at different competitions and at various times,
4. To identify the changes in the improvement of these parameters and the competitive strategy itself, e.g. faster turns as a consequence of changes in the rules, or a new technique carried out by a swimmer,
5. To secure for the coach information which helps him to choose the best strategy for the swimmer’s victory, e.g. to eliminate weaknesses in the race by means of the training session – during the
training, the optimal ratio of the stroke length and frequency can be determined in certain parts of the race, and

6. To determine important aspects of each event separately. Some of the research based on competitive analysis shows the coach, by way of the parameters, where to concentrate in order to improve swimming results (for example, 100m back in the 1994 World Championship).

The system which is coordinated with electronic measuring instruments shows the starting reaction and laps at every turn, which will be included in the competitive analysis.

The starting stage begins from the start signal to the passing of the swimmer’s head through an imagined line 15m from the starting wall. The statistics on the starting stage present the time during which the swimmer will swim 15m (the limit in all techniques for diving) from the moment of the start. For the competitive analysis carried out at the Sydney Olympic Games in 2000 by the Australian Institute for Sports Biomechanical Research, the Australian format for showing analysis results (Mason and Cossor, 2000) was used.

At the start, the statistics held the following:

– the time from jumping off from the starting block,
– the time during the fly,
– the diving time and
- the time it took to swim 15m.

Of a great impact on the quality of carrying out these stages during the start is also the “starter” as well as the preparatory (starting) position of the swimmer at the starting block prior to the start signal. The distance of 7.5m in front of a turn and 7.5m following a turn mark the turn stage.

The finishing stage starts at 5m from the finish until contact with the electronic touch-pad. The other parts of the race (without the start, turn and finishing stages) are known as the freestyle stage. The swimming results during the time of the starting, turn and finishing are expressed in seconds and corrected with 1/50 sec. The shorter these parameters are, the better the total result.

At the initial individual measuring which is carried out after the finished race – every start, turn and finish are once again analyzed for the individual average speed during that stage. This is done in the aim of comparison between swimmers through these stages, as well as the freestyle stage. In comparing the speed of every stage, the starting stage is 15m long, as well as the turn stage.
The time of the finishing stage starts to be measured from the moment when the head passes through an imagined line at the last 5m to contact with the electronic touch-pad and the speed of the finishing stage is marked as the time during the last 5m, i.e. 4.5m (as soon as contact is made with the touch-pad, around 0.5m in front of the head).

The statistics in the freestyle stage also include the following: stroke length (in meters), stroke frequency (stroke per minute), specific swimming speed (m/s) and the efficiency index.

**Stroke length** is the distance of the body passing one stroke cycle (from the time the right hand starts the stroke until the same hand is laid on the water after the retropulsion stage).

**Stroke frequency** is marked as the number of strokes (cycles) realized in a minute during the freestyle stage. Frequency must not be confused with the number of strokes, which marks the number of cycles carried out in the freestyle stage in a given distance.

**Specific swimming speed** is defined as the length of the distance which the swimmer’s head passes in one second and is marked during the freestyle stage.

**Each freestyle swimming stage** (except in the crawl style which is longer than 400m) lasts 18.5m, except for the first one which is 10m and the last one which is 20m. In the case of crawl events longer than 400m, each free swimming stage is 35m long, except for the first one, which is 27.5m and the last, 37.5m, respectively.

**Stroke length** and frequency are two parameters which determine swimming speed. The increasing of stroke frequency in seconds, and the stroke length in meters increases the swimming speed in m/s. in order to swim faster, the swimmer must increase frequency and (or) stroke length.

**The efficiency index** will depend on the increasing of swimming speed along with the increasing of stroke length during the freestyle stage. The efficiency index is larger if longer strokes and a smaller frequency are used, rather than a larger frequency and shorter strokes which achieve a specific swimming speed. Efficiency indices can be used for comparing the freestyle stages among swimmers in certain techniques in various race timeframes or in different event lengths for the concept of the race. As we have swimming progression during the race, equally we have a decrease of efficiency index during the race. This shows that there is a notable connection between the swimmers’ results and the average efficiency index in the race. Better results have a higher efficiency index and vice versa. For this reason, the efficiency index can be taken as the relevant parameter in comparing the freestyle stage between two swimmers. Efficiency counts for each technique separately and should not be compared.
The standard table information in each race aspect secures the interpreting of values of swimming performances during the entire race. It is contained in the values of the average stroke length, frequency, average speed and efficiency index in the freestyle stage, as well as the turn stage.

In comparing the average values of freestyle swimming, each interval of this stage differs in relation to the swimming distance and race parts. The average values of these parameters are presented in a table for each part of the race. The total time should be equated with the existing race results, for every swimmer. Each variation of results will be shown in the closing results of the competitive analysis (Table 1).

<table>
<thead>
<tr>
<th>100m Freestyle Men Final / 100m crawl Hommes Finale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
</tr>
<tr>
<td>-------------------</td>
</tr>
<tr>
<td>Final Time</td>
</tr>
<tr>
<td>1st 50m</td>
</tr>
<tr>
<td>2nd 50m</td>
</tr>
<tr>
<td>3rd 50m</td>
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<tr>
<td>4th 50m</td>
</tr>
</tbody>
</table>

Table 1. Presentation of competition parameters for 100m freestyle - Olympic Games in Athens 2004

This information contains a report on the analysis of the swimmers’ race for each event (speeds in all race stages) and a table of the explained parameters of all competitors in the finals and half-finals.

An analysis of the freestyle swimming shows a change of the stroke length and frequency parameters, as well as the specific speed of swimming in the swimming concept (Diagram 1).
Diagram 1. The dependence of stroke frequency on speed and length of distance

This diagram in actual fact identifies the reasons why the winners were more successful than the others and in which sections of the race this occurred, giving a quicker identification of the weaknesses of each swimmer through the presented strategy in the freestyle stage or showing the presented strategy which has not been realized.

From the contents of the table, we can conclude which time each swimmer lost in relation to a competitor, in various aspects of the race. The statistics in the tables also enables the quantifying of the performances of various swimmers in the race and compares different stages in the race between the players. Individually analyzed reports enable each player a quantified comparison between stages in the race.

Conclusion

The purpose of a competitive analysis is to offer the coaches, along with detailed statistics, an insight into the achievements of their swimmers in races and to point to oversights which should be amended in future work and help the coaches to plan for the swimmers in various events an optimal and successful strategy to use in the race. For the swimmers to have the best results in the main competition, they must improve the time of carrying out the race elements, which are scientifically predicted for the given event and reflected in the high values of the stages of the start, turn and speed of freestyle swimming. These analyses enable the coaches to define the competition model for the swimmers, in the way that the speed of the freestyle stage will be held during
V. Marković: The significance of competitive analysis in improving the results of swimmers

the race at as high a level as possible, achieved by an optimal correlation between the stroke length and frequency.

This kind of grouping of competitive parameters is important and individual for each player, and the coach can use it to subsequently plan the most optimal combination of stroke length and frequency for future competitions. The set stroke length and frequency should be relatively constant during the freestyle stage throughout the entire race.

After the race, the competitive analysis is also used to check if the planned strategy, i.e. the tactics, has been carried out and to identify all the weaknesses in the swimming performance.

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RISK MANAGEMENT IN SPORTS AND SPORTS ORGANIZATIONS

UDK 005.334:796/799

Sretenka Dugalić
College of Sports and Health, Belgrade, Serbia
e-mail: sretenkad@beotel.net

Summary: Risk management is a strategy that has so far been implemented only in financial organizations. Contemporary market conditions that have particularly affected open corporations call for transparent trading, as a prerequisite for the efforts to manage more efficiently any kind of resource, and therefore sport organizations as well. As these organizations increasingly carry out business dealings according to trading market principles, they begin to expose themselves to numerous risks in many ways, and therefore there is also a growth of the necessity to create competent sports managers within the sport business, who would, if possible, create, implement and evaluate compatible management strategies for all the occurring risks. The increasing exposure of sport organizations to the effect of numerous risks has also generated a new professional field within sports management: risk management and risk control. Theoretical theses and up-to-date business philosophy have created a basis for the selective use of risk management strategies, which primarily engage in realizing the business results, and as an outcome, in financial results in the sport business.

Key words: risks, management strategies, educational aspects

INTRODUCTION

Researching the phenomena and manifestation of risk indicates that risk, among other things, also depends significantly on the range of resources and the way they are placed on the market. The expectations of sport managers to achieve a certain level of income without initial assets and reinvestments in the technical and marketing basis can every so often, in sports, result in failure.
In addition, the transparency principle is being overlooked and there is not enough attention paid to successful business indicators such as capital turnover and its average prices, which results in a lack of return of invested assets. An uneconomical allocation of deficient resources is additionally exposed to risks characteristic for sports, such as sports injuries and disqualifications from the competition, uncertainty of results, lobbying, an increasing safety risk for contestants due to political and other pressure, and similar. The research of the illnesses and injuries that require medical treatment carried out on a Serbian football team has shown the following: upper respiratory system infections lasting from 2 to 5 days, and other illnesses lasting from 1 to 2 days. The most common are leg injuries, followed by spinal, head and arm injuries. Among individual injuries, the most common are contusions (around 55%), while the number of non-contact injuries is much lower than contact. Such a precise keeping of records is praiseworthy, but it is a question how many sport clubs really keep evidence of the risks athletes and visitors are exposed to.

When the organization of internationally significant sport events is in question, a great uncertainty of the positive outcome often discourages those who would like to be organizers. Nevertheless, it is unrealistic to expect that all the activities within sport events are going to develop successfully all by themselves, by inertia, or be without some undesirable outcomes and consequences. This paper points out some very important educational and management aspects of the risks that (along with financial and marketing risks) have a decisive role in the success of any sports organization or event.

Practically speaking, there are three forms of risk: individual (e.g. big sport events candidature), professional (e.g. a constant increasing of sport performances and regarding that, the entry point for accomplishing sports results) and the general risk that refers to the so-called “vis major” which, alongside with increasingly occurring natural disasters, are also terrorist attacks and similar unpredictable events.

Business risks in sports often refers to the risk of quitting, strategic and operative risk, risk that comes from the country’s legislature, rates and currency risk, debt payment risk, solvency risk, the political risk in the country hosting the sport event, legal risk, risk related to talent as a rare human resource, time risk (canceling of the event due to bad weather), risk related to financial services and similar, and ultimately they are all demonstrated and measured by financial risk.

Immaterial risks commonly relate to the loss of business reputation (image, references, eligibility, competence etc.), wherein the consequences of a negative image of the sport, sponsors and athletes are rarely analyzed. The image is excessively glorified, and when the sport organization is not well
positioned and has obvious problems with providing a superior game and providing satisfaction to the scarce visitors of sports events, we speak about the ownership of a “sport brand” which has no market value.

Every risk has its price, which is increased by the size of capital necessary to pay off the negative influence. Alongside a proclaimed deregulating and a significant exposure of sports to the pressure of competition, risk becomes more complex, and therefore the efforts of sport managers to respond to all the risk forms with adequate strategic solutions make perfect business sense.

Establishing, implementing and control of risk management strategies are a part of the job of top management, these activities requiring continuous processing. Considering that we mainly classify sports clubs as small organizations, it is not economical to organize departments for all the business activities, nor engage experienced human resources, which particularly affects the risk management area.

Risk management is implemented through many stages that include risk identification, the evaluation of risk, risk control and financing of risk, that is, the methods of covering risk. Considering that sports organizations all over the world rely on market forces, or they have to place their offers forcefully on the trading market due to precarious business conditions (a transitional period in the country), they will in the future be forced to pay due attention to risk portfolios or they will simply vanish from the sports scene.

It is considered that for effective risk management it is necessary to obtain capable staff, delegate responsibility, give unambiguous individual tasks and increase responsibility. Practice has shown that in sport organizations in Serbia (as well as in organizing important European sports manifestations) these parameters and a lack of good results are not an analytical process issue, though in most cases it is a matter of the management structure not being sufficiently trained to implement risk management strategies.

In accordance with this, it is the task of the management or board to resolve the key elements such as the board’s structure (the organizational form, control, and supervision), the procedure of risk reporting, training and expertise, while the board also brings decisions on which processes will periodically, by way of formal assistance resources, carry out the functions of risk management.

The failures of sports organizations show that there is no efficient risk management, or there is no awareness of the risk taken. Even when risk management is in the range of a manager’s job, it often turns out that there is no understanding of the concept, and that the management or board is inefficient and does not implement risk management processes, nor does it work on its development.
RISKS TYPICAL FOR SPORTS FACILITIES AND SPORTS EVENTS

The contemporary forms of the sports business are being carried out in conditions of an unstable and volatile environment where uncertainty dominates, as well as related business risks (the risk of failure, unforeseen losses, injuries and similar). Uncertainty is a situation in which there is an absolute or partial lack of information regarding the states of the facility and the environment. The causes of uncertainty are different and numerous: the complexity of economic relations, political and international influences, human behavior, scientific and technical progress, influences of the environment, etc. Unlike uncertainty, risk represents the degree of stability (that is, uncertainty) of the sports organization while it is achieving its goal. Risk is the likelihood (probability, jeopardy) of unwanted damages, loss or pulling out from achieving the objective, and relates to a specific business venture (decision). Uncertainty refers to an objective reality/actuality, and risk refers to a specific business situation and to the functioning of the sports organization where sports managers make their own business decisions.

Risk is a complex, set, inevitable and uncertain phenomenon that is a part of every human and business activity. In sports, it can be reduced by establishing a better organization, the control of quality, improvement and rationalization of business, a good choice of human resources and their continuous training, as well as by protection at work and other measures. Management departments have the aim to avoid risk or to reduce it to a minimum, and thus, in the case of choosing between risk and possible benefit, they decide to choose an optimal combination (alternative). This also includes the possibility of measuring or evaluating the risk that is impossible to exclude totally, and can more or less jeopardize the business dealings of a sports organization or the project’s realization (the construction of a sport facility, the organization of a sports event, people’s lives and health, material and moral loss etc.). Due to a continuous studying and analysis of potential risk, it is possible to arrive at numerous conclusions about the measures and actions that could be taken in order to decrease the risk and the uncertainty of a given project.

A useful way of making a decision is to study a certain activity by way of the generic decision-making process. The first stage includes a constant monitoring of the environment, the vicinity and technical operations in the organization. Problem defining is reached on a certain level of research, and there occurs a necessity to make decisions that would help define the problem that is being solved. Problems can be recognized as threats or opportunities (reactive/proactive). They can be expressed in relation to the weaknesses of the organizational abilities which demand amending, or as a specific capacity that can be exploited. A further identification of alternatives and their evaluation
are an iterative process that incorporates research and survey of the processes in favor of narrowing down the list of alternatives that are being developed and evaluated in stages.

In order to manage uncertainty, decision-makers endeavor to simplify the decision-making process and create assumptions for the desirable level of uncertainty by considering a simplified version as a model for decision components. It is often done intuitively or informally, using evaluation, assumptions, deduction or just practical experience. For important decisions (whilst time and other resources allow), it is possible to use formal processes (models) of decision support that include various explicitly documented models. They help on different levels of the decision-making process. Resources of uncertainty that play a significant role in the management structure of the decision-making process are being studied within sport theory and practice. They can appear in the form of political risk, credit risk, inflation and currency risk, interest rate/foreign exchange risk, time risk (time-limit breaking risk), sport facility latent flaws risk, business accomplishment, financial result risk or entrepreneurial risk, economic risk, additional financing resources insurance risk, the safety risk which the contestants of the sports event are exposed to and many others.

According to the Law on the Prevention of Violence and Misbehavior at sports events and the European Convention on Spectator Violence and Misbehavior at sports events adopted in 1985 by the European Council, there are very specific obligations regarding the technical normative and standards for sports facilities where sports events are held. According to the Law, and in correlation with the police, the sports event organizer is obliged to enable conditions for the event to take place smoothly, to provide safety of all visitors as well as to take measures in the aim of preventing and disabling violence and misbehavior at sports events, including high-risk events. The question is, why, despite the adoption of the Convention, there are some visitors who are still exposed to the effect of numerous risks, although the organizers have even more numerous management strategies available that can help avoid, decrease or postpone their effect.

RISK MONITORING AND CREATING MANAGEMENT STRATEGIES

Before starting with the construction of a sports facility or with event projecting, risk studies can enable the avoiding of direct losses caused by possible dissatisfaction on the part of the project participants, and a decline in the reputation of the sports organization and the organizers of the project (event). A realistic risk assessment can sustain the confidence of participants and contributors and help them to have trust in a successful outcome of their work, and create conditions for overcoming possible problems. Risk assessment is
a procedure for measuring the extent of risk that could cause certain loss or failure, as well as the development of risk within a given project. In order to carry out adequate quantifying and risk analysis, it needs to be determined what input information is to be gathered, as well as their source. The type of project (friendly match, derby), the conditions of its realization (existing rivalry between players and fans), the size (the capacity of the sports facility), the participants in its realization (available human resources), the necessary financial funds, as well as other factors (anonymous tips, the press, threats of violence etc.) affect the possibility and method of gathering the necessary information, as well as a choice of a corresponding risk management strategy. The quality of the gathered input information for decision-making and risk assessment contributes significantly to the choice of a corresponding risk management strategy.

The previous experiences of the organizers, managers and contributors on the same or similar projects have a great, but not crucial significance. That is why managers of sports facilities need to forecast, control and lessen the consequences of potential risks, considering all the preliminary facts, as well as reality. This means that risk management includes risk identification, risk quantification and analysis, defining and appliance of the risk management strategy and the control of risk response implementation.

Identification of risk narrowly defines a list of the specific risks within the project of constructing sports facility or holding of sports events. This can be achieved by creating a set of questions that would explain the concept of risk comprehensively and in technical terms. All employees in the facility put up with risk on equal terms, the best protection being a well-trained staff. Risky events inside the sports facility are classified according to the source or cause of their formation and afterwards they are ranked according to the possibility of a successful reaction by the management. Not all risky events are going to affect the project, just those that are related to carrying out the financial result. Because of that, along with the impact of certain important risky events, a combination of several risky events that could seriously affect the project results should be taken into consideration. In cooperation with the technical and management staff, sports managers should perform the following risk projections: form a scale that reflects the projected risk probability, describe the risk consequences, evaluate the effect of risk on the project and register the complete accuracy of the risk projection, in order to avoid any misunderstandings.

After risk identification and its assessment, the registering of risk takes part, with two standards taken into consideration: the force of impact and the repetition frequency. For that purpose, matrices are created which guide towards solid evidence for use by the management process, which make it possible to register all the perceived risks (Dugalic, 2007, p. 156).
Processing of risk is based on the carried out identification and analysis of anticipated risk. In this way, information is gained on the types of existing risks, on where and when they are to be expected, the chance of risk-occurring, the level of exposure to risk, as well as the way of managing and controlling risk.

In practice, there are two basic risk management methods: Risk Control and Risk Financing. The risk control method consists of avoiding and decreasing risk. When considering financial aspects, the following methods are also used: delaying and transferring risk.

Since there is a relatively clear picture of what is expected regarding risk, certain activities should be planned and created that would help to lower the chance for risky events to occur as well as the possibility of destructive and undesirable events. The planning of a reaction is a process of formulating a risk management strategy, that is, finding and defining management actions within the project that can help decrease the potential losses caused by the risky events to the lowest possible level. Some authors of the risk management strategy explain planning reactions by way of potential strategies such as preventing and decreasing risk, transferring risk, avoiding or ignoring risk and contingency planning.

The strategy of risk anticipation (decreasing) while constructing a sports facility or while sports events are being held is a management strategy that undergoes certain changes in its functioning in order to decrease the possibility of risky events occurring and its effect on business. Based on knowledge about possible risky events in the process of risk identification and analysis, business changes that would significantly contribute to decreasing risk are being set up and defined. These changes could be related to business time frames, the engagement of certain types of resources, business budgets of sports facilities, business specifications, certain acquisitions, required quality, etc. It is important that these changes do not significantly impact the defined goals of the sports event project, but on the other hand, they also need to contribute substantially to reducing the uncertainty and risk in business.

Sports facility management uses a number of risk management strategies to prevent the emergence of adverse events (riots, fights, inventory damages), one of them being the crowd management strategy. Crowd management strategy considers the following elements (Farmer, Mulrooney, Ammon, 1996):

- The kind and type of sports event (friendly match, derby),
- The sports facility and its surroundings (location, seating, access to the stadium),
- Existing rivalry between players and fans (notorious offenders, high risk),
- Threats of violence (anonymous tips, the press),
• Emergency interventions plans (health care, evacuation of the injured, safe exit from the facility),
• Planning the number and seating of fans (crowds at the accesses points, the stands), and
• Planning the security guard system and attendants at the sports facility.

Risk is prevented by business procedures that include the existing of a formal document which defines the course of action which is to take place in conditions of high risk and reduced liability. It is impossible to cover risk 24 hours, but with shared responsibilities (the owner, employees, audience, sponsors, tenants, contestants) the regulations of this and other documents can be carried out (concerning elevator use instructions, house rules, equipment use, behavior in case of danger, etc.). All the employees in the sports facility and all the contestants have to be familiar with the rules of the standard business and operative procedures. Prior to the event, the chief of security has to assess the potential occurrence of risk as well as make a plan for eliminating risk, in a form of an official document.

Some adverse events can be avoided by complying with the given rules, as for example system maintenance (fire protection, electrical fittings and sewer system failure, regular equipment repair), especially if a part of the facility is being leased (precise safety measures, investment and maintenance). Long-standing practical experience can help avoid risk, in the situation when there are a great number of visitors and an uncertain duration of their stay, as well as prevent delays and procrastinations (in crowds, at the food and drink stands), and help resolve situations regarding the security of sponsors (VIP safety and seats, assigned staff), as well as unplanned hold-ups, employees’ safety (measures for protection at work), safety of the contestants (legal regulations) and sport activities’ safety as well (for which the owner is legally responsible). The elements of the standard business procedure, alongside with crowd management, are also a management plan regarding intoxicated crowds, medical plans, crisis management plans and evacuation plans in case of danger, as well as parking space and traffic control plans.

Compensation for employees is part of the risk delay strategy. Employees receive bonuses and insurance from the available funds, in the form of medical insurance or invalidity benefits, compensation for working at high-level positions, and similar. There are also in place penalties for negligence or carelessness.

Risk transferring is a strategy that removes or reduces risk in the sports facility by transferring it to another party. This is enacted by a contract clause that relieves the organizer from any responsibility regarding risky events or the risk is transferred onto the second party which is then responsible for risk management. It is also possible to have a contract of insurance for risky events and
thereby lessen the damage. Many activities can be undertaken, such as reducing risk from property damaging, but it is also possible to insure a sports facility from damages or fire and compensate eventual losses in that way. The risk transferring strategy within the facility tends to transfer the risk to the second party e.g. by insurance companies that take over loss compensation, should any occur. The types of insurance in sports facility can be self-insurance, personal liability insurance and property insurance.

Personal liability insurance is a form typical for sports agents. If any injuries occur (of the contestants, athletes or the audience) because of (un)due safety measures undertaken by a sports facility manager, then a second party (injured party) can demand legal redress. Insurance contract regulations refer to the (un)taken actions of the manager with physical injury as a consequence (material damage), loss of reputation or psychological trauma.

The majority of the insured events in sports facilities (property) refer to exposure to fire, thunder, vandalism, faults caused deliberately, fights, explosions (planted, steam boilers), consequences of smoking and storm winds. If the exposures to risk are numerous (visual control is hard to maintain at larger facilities) insurance for all kinds risks can be used. In addition to the above listed examples, this clause can include collapses, night burglaries, pipes freezing and cracking, collapsing of the facility and similar. However, a constant wearing out and damages, earthquakes, flood and general dilapidation of the construction cannot be covered by the contract (vis major).

The sports facility in which sports events are held has an area designated for sports activities (competitions, games), an area for the spectators (the stands), or a space within the sports field if the facility has no stands. The organizer of the sports event is obliged by the law and cooperates with the police to provide a smooth running of the event, by undertaking measures to prevent and disable violence and outbreaks. In order to prevent the occurrence of these risks, measures that directly impact the source of the risk are undertaken. According to the identified risk, the organizer is expected to take on protective measures to safeguard those who attend sports events. The measures undertaken during sports events which the organizer has to comply with are providing adequate security services or engaging a company or entrepreneur dealing with physical security.

Risk prevention measures do not have any impact on the specific risk or the source of danger. These are the measures that compel the organizer to ensure accountability for the potential dangers that are a part of a sports event: risk alert, bans, announcements and instructions.

In the case of increased and unusual risk, the organizer is obliged to control and remove the risk that originates from the sports facility, the equipment and sports activity as well as select capable sportsmen and influence their
behavior. Therefore, the organizer is obliged to take all measures to reduce, prevent and stop the emergence of the risk within sports facilities and in their vicinity (Dugalic, 2005, p. 216).

EDUCATING SPORTS MANAGERS ABOUT MANAGEMENT

In the world and in Serbia, the educating of sports managers about risk management is becoming increasingly significant. Due to this, numerous seminars are being held that aim to present the risks, their recognition, measuring and similar in order to create adaptable solutions and strategies for managing of adverse events. Specialized areas are mostly developed according to the basic groups: market, credit, operational, and according to organizations, the primary action area of managers, or in other words, the financial sectors and companies. Sports managers can gain knowledge from these areas, primarily risk management implementation rules, (im)material components necessary for establishing and implementing, the role of line managers in risk evaluation, the purpose of portfolios, the use of basic mechanisms of risk transfer, developing internal models, management of risk analysis model inputs, internal information control and similar.

Recently, an attempt to apply this knowledge to sports has generated numerous theoretical and practical research papers that have produced a great volume of texts. In addition, within sports colleges, curricula for future sports managers are being designed and accredited, which will instruct them with basic and specialist knowledge.

The areas of study are decision-taking and risk management, action plans for urgent medical care of the contestants, development and implementation of plans for general safety and care for visitors, technical aspects of protection related to power supply, adverse effects related to equipment and the infrastructure, children and protection of the young from overexposure to physical and psychical effort, exposure to doping and similar (Spengler, Connaughton, Pittman, 2006).

However, sports managers are in a position to gain knowledge from these areas by participating in numerous workshops that are organized in electronic form all over the world. Colleges that train coaching staff also accredit curricula pertaining to risk planning and management regarding everyday sports activities, both personal or those using equipment, sport facilities or events like providing first aid services, supervision or record keeping. Within sports management, new specialist areas are being developed, engaged in safety risks, the exposure of athletes to fatigue due to traveling, forming supervision boards, financial aspects within contracting, leasing, organizing special events and a potential loss of business.
The basic areas of training for risk management in sports are professional engagement in recreation, strategic management and sports organization management. Sports managers who have an affinity for the risk management area and learn these educational processes well will be able to engage in planning and consulting in a professional manner. Since the majority of former athletes turn to training processes and private business, the founding of sports schools and camps, opening of gyms, clubs and companies within the area of sports imposes the imperative of mastering the strategies for managing every risk that occurs in contemporary practice.

Following the example of developed countries (the USA), it is possible, with joint effort of security companies and universities, to systematically develop programs for improvement of safety in sport and reducing risk through planned managing of the above-mentioned. This kind of cooperation has been achieved between the National Center for Spectator Sport Safety and Security (NCS4) and The University of Southern Mississippi, who organize seminars around the country which popularize this area. Raising awareness of the population and a multidisciplinary academic training of experts in the area of prevention, crowd management procedures and politics, evacuation and emergence of adverse events in sport significantly and jointly contribute to a greater interest on the part of both the visitors and the population in general in safe practicing of sports.

**CONCLUSION**

The benefits gained through the implementation of risk management strategies in construction of sport facilities, running management or in the organization of sports events, are multiple:

- A greater number of visitors in sports events
- Higher incomes for the organizers
- Better safety for athletes, visitors, sponsors, delegates, employees
- Lower expenses by reducing insurance payments
- A more efficient management of organization, sports event and processes
- Compliance with legal standards, legislation and other formal requests (contracting) and
- Creating a positive public image

All the mentioned justifies increased demands for the implementation of the strategies that will help prevent, reduce and transfer risks to second parties. Only a competent, trained sports management can provide efficient risk management in sports. For training such experts, everyone can benefit – every athlete, sports organization, as well as sports and the society in general.
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Summary: The paper analyzes the possible risks during the managing of utility areas in a sports facility and the appropriate risk management. In order to successfully deal with this, it is necessary to identify, quantify, control and manage the risks which appear during the management of utility areas within a sports facility. A utility area impacts the behavior, expectations and perception of the users in regards to the service. Its task is to represent the sports facility and the services rendered in the best possible way, to draw attention to the facility by distinguishing it from the others, to stimulate users to use the services and to help the sports facility create an appropriate image. The aim of this research is to highlight the necessity and urgency of investing into sports facilities, and promote its utility area. By a comparative analysis of the organization of sports events in a sports facility in Serbia and other countries, the paper draws attention to the risk of managing a utility area and its significance for the success of a sports facility.

Key words: risk, strategy, management, utility area, sports facility.

1. INTRODUCTION

Nowadays, business ventures are carried out in insecure and changeable environments dominated by insecurity and linked with this, business risk (possibility of failure, unforeseeable losses and similar), where the uncertainty of the situation occurs due to the fact that there is a total or part lack of information regarding the state of the facilities and environment. Contrary to uncertainty, risk represents the degree of security (or insecurity) of the organization in carrying out its aim. Risk is the chance (probability, danger) of unwanted damage, loss or deviation from the aim, linked with specific business ventures (decisions). Insecurity is linked with objective reality, while risk is connected
with the existing business dealings and work of the organization, in which the management brings business decisions. The amount of insecurity in business dealings is very stressed and significant so it is necessary to view the generic process of decision-making. The first stage in the process of making decisions involves a constant monitoring of the environment, the surroundings and the current business dealings of the organization. The problem is recognized on a certain level of research and there is a need to make one or more decisions in order to resolve the existing problems.

The correlations between the stages in the process of decision-making and insecurity were described by Radović, D. (2009, p. 145) who also analyzed the process of decision-making in risky conditions from the aspect of the role of the management. Risk does not signify a guaranteed forthcoming negative effect, but rather, it is a negatively assessed consequence whose realization is uncertain. Managers who manage sports facilities during daily business activities or during the organizing of sports events run into numerous risks which are defined in the first stage of the so-called risk identification.

Researching risk is preceded by the creating of a risk management strategy in the aim to stimulate successful business dealings of sports facilities. If this is done before the start of the project, it will secure it from direct losses, from the dissatisfaction of all the project’s participants, and the loss of reputation of the sports organizations itself as well as the project (event) organizer. A valid risk assessment helps all the participants and associates working on the project to believe that it will be carried out successfully, as well as creating conditions for the overcoming of problems which can be reached during its realization.

Risk assessment represents the procedure which assesses the extent of the risk which can cause loss or failure, as well as the impact of the risk on the project. In order to carry out adequate quantifying and risk analysis of the project, it is necessary to determine which input information should be collected, as well as the sources. The type of event (friendly match, derby), the conditions in which it is carried out (the existing rivalry between the players and the supporters), the size (the capacity of a sports facility), the participants in its realization (the available human resources), the necessary financial means, as well as other factors (anonymous reports, writing of the media, threats of violence, etc.) will also impact the way of gathering the necessary information, as well as the choice of the appropriate risk management strategy. The quality of the gathered input information for decision-making and risk assessment contributes significantly to the choice of an appropriate risk management strategy.

The prior experiences of the organizer, manager and associate on the same or similar projects, have a large, but not crucial significance. Thus, managers attempt to predict, control and decrease the consequences of possible
risk during the realization of a project (event), taking into consideration all the prior facts, as well as the real state of affairs.

2. RISK MANAGEMENT STRATEGIES AND THE SPORTS EVENT – (Risk Strategy)

The sports event is a specifically designed offer of a limited duration within whose foundation lies a suitable idea, which is shown as an original ideological offer with the joint engagement of the executor and material funds, that is, by means of an applied managerial “know-how” on the market (Tepić, 2009, p. 4). Sports events are planned, such as mega events (for example, the Olympic Games, the World Championship in football), the Hallmark sports event (the Wimbledon tennis tournament), main/special events (exclusive sports matches) which can be of a profit and non-profit type. According to the place and method of organizing, they are divided into the following: events in a closed and open space, on the ground, in the water and air, with a regular and periodical schedule of events, public and private events, professional and amateur events, and those with a defined and a free structure of competing. This classification of sports events is significant for research, as their specific nature and interpersonal differences produce different risk factors of a variable intensity, and thus it is necessary to research them methodically and explicate them.

The organizing of any event has the aim to instigate feelings, primarily positive ones, as well as the feeling of satisfaction on the part of visitors during the experiencing of the events. With sports events, this feeling mostly depends on the results of the contest. The problem occurs when there is no expected result, in which case other factors come to the fore, to which managers should pay attention. One of these factors is the service itself in the sports facility (servicescape) and the services environment (facility). The loyalty of the visitors is achieved by a positive experiencing of the quality of services, the corporate image of the organizer and the projected satisfaction of the visitors. Taking into consideration that a sports event is viewed though the short duration of the offer, and the correlation of the organizer and the visitor are determined by the duration of the event, the program, the communication of the organizer, that is, the executor and the event visitor, there are high risks of the business dealings of sports. The utility area is a space within which a service is provided (the sports facility where the event takes place), where the product is sold, the area in which the organizers, athletes, recreational athletes and spectators meet, and the place in which the visitor decides whether s/he will use the services again or revisit the sports facility.
2.1. Risk management

Regarding risk and risk management in sports facilities, it is inevitable to mention the factors which appear during business dealings and contribute to the existing of risk during the realization of business aims. We distinguish between three key risk factors: risk event, probability of risk and loss size.

Risk management in organizing tennis tournaments is a formal process which involves a constant and systematic identification, prediction and assessment of risk factors, preparation and planning of defense actions and reactions which can contribute to a decrease of risk. Risk management includes the uncovering of preventive measures in the aim of decreasing risks which can occur on tennis fields. During this, it is obligatory to review and analyze the costs linked with these preventive measures and actions and carry out an assessment if it is justified to make such costs for decreasing, though not the total elimination of risk. The aim of risk management is, in so far as it is possible, to decrease the negative influences which can jeopardize the course of business, as well as to make use of all the given possibilities for a more successful and rational carrying out of business activities in a sports organization. In that sense, risk management implies the identification of risk, quantification and risk analysis, defining and applying risk management strategies and the control of carrying out of responses to risk.

![Table no. 1. Example of classification of time risk with a 25-matrix table in view of tennis as a sport and the direction of activity.](image)

Identification of risk includes a list of specific risks regarding the project of constructing tennis courts or organizing tennis tournaments. One of the best methods for understanding each risk is to use a set of questions which help the planner to value the risk in schematic or technical expressions. Basic
risks are included in daily business dealings, and managers review, track and work with quantifiable factors. Risky events in a sports facility are classified according to the source or origin, and most often are ranked according to the possibilities of a successful managing of reactions.

After risk identification and its assessment, the recording of risk is carried out, which is possible, for example via, the following criteria: the strength of influence and repetition frequency. To that aim, matrices which lead to the collecting of specific data for the managerial process are created, by which it is possible to record all the differences (Dugalić, 2007, p. 156).

**Risk processing** is carried out based on the identification and risk analysis which is expected in the realization of the project. Principally, we get information on the types of risks which exist, on the location and expected situations, the possibility of risk occurrence and the degree of risk exposure, as well as the management method and risk control.

We distinguish between **two basic methods of risk management**: risk control or the avoiding of risk and decreasing risk; and financial risk control (Risk Financing) or retaining risk and risk transferring. In that way we get a relatively clear picture about what is expected regarding the risk of the project, and certain activities which would decrease the probability of realizing risk events, while the possibility of the occurrence of damaging and unfavorable events should be planned and formulated. Planning the reactions represents a process of formulating a risk management strategy, that is, finding and defining the management actions in the project with which possible losses from risk events would be reduced to the smallest possible degree. Planning reactions involves possible strategies such as: preventing or decreasing risk, shifting risk, avoiding and ignoring risk, and contingency planning.

### 2.2. Strategy of preventing (decreasing) risk

Decreasing risk during a tennis tournament is a strategy which enacts certain changes in business ventures in the aim of decreasing the possibility of a risk event and its impact on business. This means that, based on the knowledge of the possible risk events which occur in the procedure of identification and risk analysis, changes in business ventures which will significantly contribute to risk decrease are found and defined. These changes can be linked with the time business plan, the engaging of certain types of resources, the business budget of the sports facility, business specifications, certain acquisitions, or the required quality of parts and the entire project of organizing the tennis tournament. It is relevant that these changes do not significantly influence the defined aims of sports manifestations, and that they do significantly impact the decreasing of uncertainty and risk in business ventures. Managers use numerous strategies for managing the risk of unwanted events (disturbances, fights,
breaking of inventory), while some of the strategies are also management of
the masses, i.e. crowd management, a standard operative procedure, as well
as compensation for the employees. The strategy of preventing crowd distur-
bances at tennis tournaments is not as significant as for example in football
matches, but in the case of the possibility of certain political risks (Davis Cup,
the Croatia-Serbia meet in Split in 2010), or random natural disasters (heavy
rains, fire), it is also necessary to prepare these plans.

2.3. Strategy of transferring risk

Transferring risk is a strategy which endeavors to liberate or decrease
risk in a tennis facility in such a way that a part of the risk or the entire risk
will be transferred to the other party or person. This is done by altering the
contract, which entails an ending of certain commitments which carry risk, or
the risk is transferred by contract to another party, which is now responsible for
risk management in the project. It is also possible to have insurance from risky
events and thus decrease the damage they can cause. Numerous actions can be
enacted, for example in the aim of decreasing risk due to property destruction,
or insurance of a sports facility from damage or fire. The forms of insurance
in a sports facility are the following: self-insurance, insurance from personal
responsibility, and property insurance.

2.4. Strategy of risk avoidance (ignoring)

This strategy of securing is used when there is knowledge of risk and
the costs of the assessment of activities regarding their avoiding will not be
overly high. This means that except the awareness about a possible occurrence
of a risky event and its impact on the event, no action is carried out and the
risk is ignored, considering that the risky event will not occur or that there is
a small possibility of its realization. Avoidance means that the sources of risk
are to be removed or not activated. The advantage of this method is in the pos-
sibility that the risk will not occur if its source is never activated. This method
has limitations, as some risks cannot be avoided (for example terrorism, floods
which are a natural catastrophe, or storms, as well as civilian responsibility due
to use of dangerous substances).

3. RESULTS OF RESEARCH OBTAINED BY
COMPARATIVE ANALYSIS

The practical application of stages and risk management strategies typi-
cal for sports events is shown in the following cases (an example has been
taken from international and Serbian sports practices).
3.1. C.S. The Wimbledon tennis tournament

Wimbledon is the oldest and most prestigious tennis tournament, often considered the official world championship. It is one of the four Grand Slam tournaments and the only one which from its founding in 1877 has used the same court base. The founder of Wimbledon is the private club The All England Lawn Tennis and Croquet Club, and The Lawn Tennis Championship Meeting tournament is under the joint management of AELTC and the Lawn Tennis Association (LTA). AELTC is a private club founded in 1868 as an NGO. As the host of this tennis tournament, LTA secures financial means for the development of tennis in the UK, through tax reduction.

The Management Committee and several of subcommittees take care of the aspects of the tournament such as hospitality, finances, tennis courts, IT, broadcasting programs, marketing, game schedules, ticket sales, transportation. The work of these subcommittees is supported by seven members of LTA with a full work schedule and the managers of the club personnel. From 1922, the club has been located in Church Road, and the tournament is the only Grand Slam competition which is played on grass. The club is made up of 19 grass courts (including the Centre Court and No. 1 Court), five courts with red clay, three courts with continental clay, one with American clay and five closed courts (2 Greenset Velvelux and 3 Greenset Trophy). In 1979, the seating area of the Centre court was raised by 1 meter to secure another 1,088 seats. In the same year, the new Salon on the northern side of the Centre Court was built for the shareholders. The following year, the old complex of No. 1 Court was restored and extended to the north and south sides and the capacity of the court was extended by another 1,250 seats.

A part of Aorangi Park was restructured into tennis courts in 1982, in order to obtain more space during the championship. The building of the eastern part of the Centre Court started in 1985. This huge endeavor secured over 800 additional seats and additional space for the commentators (the media), new accommodation for the administration, a redesigned museum, etc. In 1986, a new 2-story pavilion was built in one part of Aorangi Park. In 1991, the northern building of the Centre Court was expanded to the north to secure a larger space for shareholders, the museum, offices, shops, the library and the club. The club’s long-term plan is to improve the courts continuously. No. 11 and 12 Courts were demolished and reconstructed for the needs of the tennis tournament. Along with this, an experimental SoftB hard base was laid down. In Aorangi Park, there are 22 grass courts for training, before and during the championship, and two acrylic courts. The entire space, including the parking area, covers more than 42 hectares. Except for the Centre Court and No. 1 Court, all the other courts are used by the club during the entire year, as well as by the LTA, sponsors and players. The grass courts are used from May to
September, except for the Centre Court and No. 1 Court, which are used only for championships. The courts are used from time to time by some clubs and organizations for organizing various events and tournaments. No. 1 Court is also used for the needs of the Davis Cup competition. The last competition between the UK and Austria on No. 1 Court took place in September 2008.

Preparations for the championship start immediately after each tournament. Upgrades are implemented into the program for the next championship by the Management Committee. Between the championships, the club has regular meetings with the local councilors (e.g., Merton Council), and other interested parties, in the aim of assessing the problems which occurred during two weeks and finding solutions. Maintaining a court, renewing the grass at the Centre Court and No. 1 Court starts immediately after the championship, and the other courts are maintained during August and September. Grass is sown again on Centre Court and No. 1 Court, almost every year, where necessary and as soon as possible after the championship.

Crowd management: The association of Wimbledon Honorary Stewards is responsible for managing the masses and acts as a “host” for the public, directing, informing, helping and giving instructions to the visitors. The members of the police forces stand in rows (within and outside the court), the supervision of the seats of the spectators is carried out with the help of volunteers, and the entire security system in London is also supported by the fire brigades.

Wimbledon in the 21st century

In order to retain its leadership, a long-term plan was made in 1993, which will improve the quality of events for the spectators, the players, the officials and society in general. The first stage of the plan was completed for the 1997 championship, which included the building of Aorangi Park’s new No. 1 Court, the broadcasting center, two auxiliary grass courts and the tunnel for linking Church and Somerset Road. The second stage includes the removing of the old complex of No. 1 Court to make room for the new millennium building, to secure the extending of the facilities for the players, a space for the officials and members, as well as expansion towards the west of the seating area of the Centre Court with an additional 728 seats. Stage 3 is a public opening of the new building of the museum, while there is a plan to develop a new Centre Court towards the east and the west of the building, in order to secure better conditions for the public, as well as enlarge the seating capacities to 15,000 seats, and build a movable roof for the 2009 Championship. With this, the modernizing of the Centre Court will be complete. During the year, the club is continually alert to the need to improve the facilities and the courts in accordance with the pace and needs of modern sports. In the last couple of
years, much has been invested in order to realize better conditions for the players, the spectators, the officials and the media.

3.2. The Serbia Open

In May 2009 the Serbia Open became the first Serbian ATP tournament, held in Belgrade on restructured tennis courts of the Milan-Gale Muškatirović sports center, nearby the river confluence, where the Sava River flows into the Danube. The newly-built center, on 3 hectares, has 5 courts – a central one, with 7,000 seats, 2 smaller ones with 1,000 and 500 seats, as well as another 2 courts which are intended for the training sessions of the tournament participants. The capacity seating area has this year been extended by another 1,000 seats and now amounts to 10,000. The tennis complex on Đorđić was built in an exceptionally short time in line with high standards, and exceeds ATP tournaments from the 250 series. The 2009 tournament was pronounced by the ATP organizations to be the best organized tournament in the ATP World Tour 250 category, due to an exceptional organization and a superb atmosphere, as well as the quality of participants. No tournament from the same category, which includes tournaments in Moscow, Los Angeles, London, Vienna, had a participant which was placed among the first 5 players on the ATP list, such as is the case of the Belgrade tournament. The 2010 Serbia Open is one of the most significant newer sports events in the country, and except for quality players, the strength of the tournament are the visitors, of which in 2009 there were more than 100,000. The tournament exists for the benefit of the visitors, for every individual who loves tennis, sports, a healthy lifestyle, for all family people, students, for the oldest citizens, as well as the youngest for whom there are special events organized. To encourage a larger attendance and further popularize the tournament, the organizer this year has enabled that the entrance into the village and attendance to all the matches, except the main court, are free of charge.

Except for the tennis matches, the public can also enjoy a large number of activities in the promo village. Parties, promotions, concerts, performances and sweepstakes were organized. Tickets for the central court could be bought at the ticket offices of the Ticket Service (www.tickets.rs), as well as at the venue. This year, there were many changes made in the promo village. Some 120 birch trees were planted, a statue was mounted of Novak Đoković, a new fountain built in the central part of the promo village, and behind the central court, there was an entire part restructured just for children. Several video beams were set along the promo village so that the matches at the central court and No. 1 and 2 courts could be watched by those not in the seating area. A new shop was opened within the tennis complex, set beside the central court, where brands such as Head, Sergio Tacchini equipment, various souvenirs with the inscription Novak and Serbia Open could be purchased.
The organization of the tennis tournaments in Serbia held till now commit the organizers to a thorough investigating of this area, with the aim to quickly learn from the experiences of others, as well as academic sources, as well as promote business dealings in order for the tournament to become more visited and economically more viable for the organizer and safer for the participants and visitors. Namely, as the number of visitors increases, as well as the number of sponsors, media members and other participants, the business dealings will become more complex, so that risk management is a real professional challenge for sports managers. The acquired knowledge based on case studies can be very useful, as well as the application of the theories and contemporary sports practice.

4. DISCUSSION

The research herewith was directed towards the risks of business dealings and appropriate strategies for managing utility areas (spacescape) in sports facilities, while the case study was the organization of a tennis tournament in various regions, characterized by significant economic, cultural and social differences. The aim of the research was to test the differences and the theories, so as to make useful conclusions, while the experiences serve to organize similar projects on a higher level in other, different areas of Serbian sports practice. Regarding this, from the gathered material, we can stress the following aspects of risk:

4.1. Assessment of political and credit risk in Serbia

Considering the political risk, Serbia, with a DB4d rating, is classified as a country with a moderate business risk (meaning a moderate-high instability and losses in business dealings), among countries which at the very start turn away all potential investors, this also being valid for our organizations, whether they are sports or business. It has become standard practice that during the organizing of world and European championships, countries in development, as hosts, are required to provide guarantees from their government and similar risk coverage. However, Greece, who founded the Olympic Games and is a member of the EU, is a good example of how hard it is to accurately predict political risk from the aspect of management.

The assessment of credit risk is carried out in several ways, one of them being the 5C method, which includes as many indicators. By applying this method in sports organizations in Serbia, it is easy to note that the credit risk is large, as, property of insufficient quality is secured as an instrument of ‘del credere’ risk.
4.2. The assessment of inflation or currency risk and examples of possible protection

When we talk about inflation or currency risk, the changes in the intercurrency rates would decrease or increase the ability of each sports project to return its debt payments. Considering the instability of the rate of the dinar in relation to the Euro, there would be a great risk of not being able to pay off the loan. The risk is decreased when sports managers incur liabilities in the same currency as the income, in conditions of stable prices. In countries in transition which have a floating exchange rate, such as Serbia, or a regime which inclines towards this regime (a slowly managed rate), and which is characterized by oscillations and a trend of a foreign currency rate in the direction of appreciation (growth), as well as depreciation (decrease) of the domestic currency, of an exceptional significance is the issue of the protection of the investor (hedging) from the changes in the currency rate. Namely, realistically speaking, no one is capable of absolutely predicting the course of changes in the currency rates, but it is still possible to gain protection from the risk of changes. This especially refers to those in foreign trade, such as exporters and importers, but as international presence and competition is typical for sports, sports managers must respect this risk.

4.3. The risk of not meeting deadlines and building budgets

It is well known that the majority of sports facilities in Serbia were built some time ago, and thus they need restructuring, modernizing and/or rebuilding. In that case, along with the mentioned risks, there is also a risk of not meeting deadlines and building budgets, reconstruction or modernization of facilities, hidden flaws due to typical unprofessionalism and similar, which raises the costs of financing the building of the facility itself. Due to general instability in the country, it is not uncommon that construction work is faced with a large fluctuation of employees and strikes (due to dissatisfaction by reason of unpaid wages), and thus, due to a lack of control, many omissions can occur during the building of building structures. Also, the cause of hidden flaws of the facility can occur due to poor quality of building components. In order to decrease the risk which can occur due to hidden flaws, a longer warranty deadline is requested from the executor of the works and the designer (by contract).

4.4. The risk of realizing business results, economic risk and the financial leverage method

Risk of realizing business results (entrepreneurial, financial risk) is a risk which every sports manager and entrepreneur is faced with. Financial forecasting and programming is an example of a strategy for preventing financial
risk which can be used in managing sports facilities. Economic risk represents a lesser or greater insecurity linked with the expected results of business activity. The risk can be business and financial. Leverage is one of the methods with which the business effects can be assessed, along with the presence of fixed expenses. Leverage can be business, financial and combined. Financial leverage in business dealings is used by profit-oriented sports organizations, by combining several sources of financing and by way of the rate of profit, and represents the efficiency of using someone else’s capital. Once reached, this efficiency is also transferred to an efficient use of one’s own capital, with which the average price of the total used capital decreases in the future due to continued efficiency (Dugalić, 2005, p. 160).

In local practice, we can hear that sports organizations should use other sources as well, but if they do not have their own capital, they will never realize these effects. Sports organizations in Serbia have no possibility of using financial leverage due to the impossibility of using several sources for financing, and especially loans. The reason for this is that a mortgage cannot be obtained, nor a guarantee for covering the ‘del credere’ risk on a facility which is in communal ownership, as well as unresolved legal relations (sports facilities in Serbia are often built upon nationalized property).

An example of a successful application of financial leverage is the reconstruction of the tennis courts in Dorćol, the M.G. Muškatirovčić sports center, as the largest tennis tournament in Serbia which represents a collaboration of the private sector and the local and federal governments. The reconstruction of tennis courts was financed by the budget of the Republic of Serbia, the city of Belgrade and the municipality of Stari Grad. The Republic of Serbia alone earmarked 40 million US dollars to restructure the tennis courts and the auxiliary buildings, with the aim to use these tennis courts for the Universiade. The city earmarked funds from its budget for the needs of the tournament and rented seating area space for some ten thousand visitors, and the Belgrade Land Development Public Agency organized the access points and parking lots around the sports center.

Considering the mentioned high business risks in Serbia, it can be said that the Family Sport company had very courageously and intelligently entered the project. It can be seen that a combination of different sources of financing are used, which increases the probability of success of the entire project, the organization of the tennis tournament, as well as decreasing the probability of some of the mentioned risks occurring. Thus, in the assessment of the business effects in sports, the advantages of leverage can be used (business, financial or combined).
4.5. Assessment of security risk and security risk for visitors

The individuals who manage the tennis courts and the organizers of the sports events, having in mind all the risks for the organization of the tournament, undertake all possible combinations of protection against risk. They use strategies of avoidance and undertake measures for decreasing risk and measures to endure the security and safety of visitors. At the same time, much attention is given to the comfort of the visitors during their visit to the tennis tournament, in order to promote the offer so that the visitors’ stay lasts as long as possible in the tennis facility, and provides satisfaction to the visitors even if there is a lack of financial result. This kind of long-term orientation and professional approach will help to realize all the aims, along with the risks which, with time, will decrease. And even though the competitions at the tennis courts are quite secure and safe, that is, the inclination of the public towards aggressive behavior at tennis tournament is lesser than at football matches, security measures for the visitors must be carried out in any case. Let us reiterate the unpleasant event when a Serbian tennis player was assaulted and stabbed.

**Example 1.** The incident which shocked the world on April 30, 1993: in the quarter finals in Hamburg in the match between Monika Seleš and Magdalena Malejeva, a 38-year-old spectator, Gunter Parche, an obsessed fan of Steffi Graf, stabbed Monika in the back between the shoulder blades. She was quickly taken to the hospital and recovered physically within a couple of weeks, but the assault left larger, psychological scars. She did not return to play professional tennis for the next 2 years and when she did, the perfect balance of physical and psychological performing which is necessary for top tennis was impossible to recapture. The assailant received a suspended sentence due to pleading insanity, and probation for 2 years with mandatory psychiatric treatment. This incident caused heightened security measures to be introduced at tennis tournaments (8).

**Example 2.** At the US OPEN in 2009 held from August 31 to Sept. 13, 2009, in NYC, during the tennis match between Rafael Nadal and Gael Monfils, one of the fans of R. Nadal ran into the court and kissed him. The public reacted with sympathy to this incident, and it ended without negative consequences for the participants, especially for R. Nadal.

This and similar incidents point to the fact that in tennis competitions there are also security risks for the participants, but luckily, these are very rare. They convey the message to the management of the tennis tournament as to the consequences which can be caused by a lack of carrying out security measures, or decreasing or not predicting risks. Learning from the experiences of others is more effective than learning from one’s own mistakes.
4.6. The significance of the utility area and strategies for increasing business results

Lately, there are tendencies to use the sports event, in this case a tennis tournament, as a possibility to create additional sources for promoting the organizing of tournaments through investing and promoting offers of sports products and services, and promoting the places of distribution or delivery of services, through the physical utility area of tennis courts (facility). In the part of the paper dedicated to Wimbledon, we can see how much attention the management had invested in the following: the restoring and reconstruction of tennis courts, an increasing of capacities of the seating area on the Centre Court and No. 1 Court, enhancing and extending the parking lots, building a museum, special areas for officials and VIP guests, building a moveable roof for the Centre Court (in case of rain). All this points to how much attention the management of Wimbledon dedicates to the end consumer of the services (visitors, associates).

The products which are being offered at the tennis complexes have their specific traits, such as uniqueness (distinctiveness) of the same product and intangibility (it is impossible to physically touch a sports event). The users of products on tennis complexes are the supporters and fans of tennis, TV subscribers, annual subscribers and club members, the media, sponsors, advertisers, buyers of equipment, sports clothes and shoes, etc. Each of the mentioned users have their own motives for using the products/services, while their common motive is a full, inclusive and comprehensive sports experience. The basic offer of the sports product/service ensues from the creating of the sports experience, which in reality represents “a relevant usefulness” or “the essence” of a sports offer for every potential user (which a visitor becomes by purchasing a ticket). Supporters fulfill their need for entertainment, fun, belonging to a group, through personal satisfaction, respect from others, etc. In turn, advertisers, reporters and sponsors see the possibility of reaching a large number of spectators (the target population, potential users). This is at the same time also the first level of products/services.

The second level of product/service makes up the “basic product” which is made for essential use; this is a sports event (the tennis match of Novak, Troicki, Tipsarević). The third level of sports product is the “expected product”, what the buyer expects to gain by purchasing the product: a sports result, quality tennis, a sports supporter atmosphere, a pleasant décor of tennis courts, an acceptable and accessible ticket for the match, the food and drinks in the facility, and comfortable accommodation. The fourth level of products, taking into consideration the value for the buyer, represents the so-called “enrichened product” with which the buyers fulfill their wishes. The created image of the individual athlete or the tennis tournament has a strong impact on all
interested parties for the sports product or service (by purchasing the ticket, the possibility of getting a gift, a photo opportunity with famous tennis players, an unannounced arrival of a famous musician, the athlete as a guest of the evening). The arrival of Nick Bollettieri to the Serbia Open tennis tournament has caused a great interest of the tennis public in Serbia, as well as worldwide. Products with an image are especially attractive for sponsors who use them for advertising.

The fifth level of product and service is the so-called “potential product” which represents all the possible changes and ways of enriching the product in the future, creating in this way a recognizable sports brand. Its creating is a very long and exhausting process. Only large sports clubs or individuals have the ability to create an organized sports event and to achieve top sports results, by which they create a high level of identity and image, and based on all this, a recognizable product or service brand. For example: The brand is made up by the name of the brand (Wimbledon), the sign (logo of a purple green color), the trademark (a tennis player’s white equipment) and the copyright (the exclusive right of sale of products with the Wimbledon symbol).

Regarding sports services which are delivered to tennis complexes and which are impacted by the utility area of the tennis courts (facility), including the human factor which renders services, three elements are relevant for the users of the services (visitors):

- easy access to the location of the sports facility (near the center of the city, proximity of significant highways, possibility of using various transportation),
- ease and comfort in the tennis complex and around the complex,
- appropriate services at the tennis complex.

The physical utility area of the tennis courts and facilities consist of the stands, the spatial plan, design of the equipment, use of color, light effects, music, etc. The following visit will depend on how the visitors perceived the entire tennis complex. If the visitors of the tennis tournament perceived a high level of service quality (servicescape), it can be expected that they are satisfied with the entire tennis complex, which in turn may incur in them a desire to once again visit the tennis tournament, and thus also the sports facility. Yet if the visitors of the tennis tournament had perceived a lower level or bad quality of service, there is a smaller degree of satisfaction and thus a lesser desire to revisit the tennis tournament and facility. The visitor will make a decision of a renewed visit to the tennis tournament based on the perception of prior experience, impressions of the utility area, the environment, the specific nature of the game, and the level of the experienced excitement during the competition.

Some research papers claim that one person will share their positive impressions about some sports event, product or service with at least another
three persons; however, it has also been determined that they will share their dissatisfaction with eleven people, on average (Krstić, 2009, pp. 26, 27). The results of this research clearly show that positive oral communication, word of mouth, is significant, as it impacts the promotion of products and services of sports organizations due to a higher credibility and reliability, and thus also the risk of business dealings which appear in a poorly conducted organization and an insufficiently good service. This form of promoting of product and service is hard to control, but its potential is very big, something which the managers should know and use and also contribute to a stronger building of the image of a sports organization, its products and services. Managers must always bear in mind that it is not worth toying with the trust of consumers or service users.

An efficient attracting and holding on to users of products and services solely depends on the level of the quality of products and services, retaining this level or promotion, and securing a permanent usefulness for the consumers (visitors). With a quality service and a pleasant environment in which the service is rendered, the organizer of the tennis tournament and all those employed wish to send a message to all visitors and associates that they care about them and their opinions. The tournament managers must dedicate special attention to the training of the employees on the so-called first line or the executors who have direct contact with the visitors (in buying tickets, security at the entrance, and the staff who sell food and drinks within the tennis complex). The first impression can also be crucial for visitors. The management of the tennis tournament must pay a great deal of attention to the style of clothes of the employees, the value system, attitudes, standards and norms of behavior of the so-called cultural marks of the culture of the tennis tournament and the event itself. The employees must be aware of the difficulty of the task and the responsibility they have while they carry out their tasks. In this way, the tournament itself gains in significance by strengthening its own image. Based on these characteristics, the uniqueness and distinctiveness of the tournament can be built in this country as well as worldwide.

*For example:* During the tennis tournament in Wimbledon, the tennis players can wear only white. Also, tank tops cannot be worn, and the ball collectors wear purple and green outfits, the official colors of the tournament. Wimbledon has also shown its uniqueness by serving strawberries and cream.

Basing itself on Wimbledon, the Serbia Open management can build its uniqueness by serving raspberries and cream, as it is well known that Serbia is a significant exporter of raspberries to the world markets. The management of the Serbia Open tennis tournament could work a little harder on building up its image, though it can be said that the image of Novak Đoković is used well to popularize this tennis tournament. Some special feature could be found from this area which would mark and promote the tournament. The fact that the organizers of the Serbia Open understood the great significance of the utility
area space has been shown by the changes in the promo village. It is a great challenge for the manager and the organizers to reach a financial close, and at the same time to adapt to the standards and make accessible the prices of the services which are rendered on the tennis complex and during the tournament to the standard of the visitors. The example of the Serbia Open tournament represents a positive attempt by the Serbian tennis community to successfully apply contemporary managerial concepts, to affirm sports management, to link the place of application and theoretical knowledge and practice, as well as apply the knowledge acquired from the experience of others.

4.8. The state and significance of the infrastructure in achieving and promoting sports results

The tennis courts in Dorćol are sports facilities in whose reconstruction there has lately been much investment. But, in Serbia there are a large number of sports facilities in which there has been no investment for years. The existing capacities of the sports facilities in Serbia are either out of use or not used sufficiently (in the world, sports facilities are economically viable if they are functional for at least 200 days in the year), while there is a lack of state care of the sports facilities (Dugalić, 2007, p. 16). A lack of institutional and financial support and control only extends the agony and hopelessness of the situation with the sports facilities. For the majority of sports facilities in Serbia, there is no clear regulating of owner status, and they are ‘run’ by non-profit organizations. There are great possibilities of abuse and various political influences in managing financial books. During the long time of their existing, there was no practice of earmarking a part of the earnings (accumulation) for the reconstruction of the existing facilities, and there have been no reinvestments in sports for a long time.

In the world and Serbia as well, there is a tendency of developing modern fitness centers, in which there is great attention paid to equipping utility areas (facility) and promoting services in facilities (servicescape). This practice should be applied to other sports facilities as well. In Serbia in 2008, a Strategy of Development of Sport in the Republic of Serbia was made (2009 – 2013), where of three strategies, one was dedicated to the development and promotion of sports infrastructure. This strategy defines the aim in the area of sports facilities through the creating of conditions for systematic planning and adaptation and their financing. According to this strategy, it is necessary to first make an analysis of the state of sports facilities in the Republic of Serbia during 2009, and in 2010, to carry out and publish the categorizing of sports facilities (the Ministry of Youth and Sports, the Republic Institute of Sports, the Ministry of Education). Based on the categorizing of sports facilities, it is also necessary to define the priorities for adaptation, and a plan for building sports facilities
during a 5-year period, as well as to create a unique network system for registering sports facilities in the Republic of Serbia during 2011.

5. CONCLUSION

The realization of top results in sports (analyzed on the example of tennis) precondition very critical factors which make up the material-technical base: investing, infrastructure, massiveness, training and educating of athletes and employees, as well as a quality program of developing sports branches.

1. Investing in the sports infrastructure – as one of the important factors for creating competitive advantages, it helps to realize the significance and necessity of a greater use of capacities of the existing sports facilities, and the reconstruction and building of more contemporary facilities. Along with the necessity of investing in sports infrastructure, there is also a need to introduce changes in the business dealings of sports facilities. A clear defining of owner structure of sports facilities has as its aim the attracting of investors (i.e. capital concentration) and raising efficiency of business dealings of sports organizations. By securing different sources of financing for maintaining the continuity of the business dealings of sports organizations, the possibility of applying financial leverage is created, i.e. an efficient use of someone else’s capital, especially one’s own. Sports managers with theoretical knowledge acquired during the process of education, with their abilities and skills and by implementing them in practice and using the advantages of financial leverage should secure an increase in the efficiency of use of capital realized via the sports business. The advantages of financial leverage are used by profit-orientated sports organizations in economically developed countries.

2. Investing in the profession – A competitive advantage in sports can be realized by way of training and education. Serbia during the 21st century, by applying the Bologna Declaration to the educational system in sports, has done much in the direction of developing and training experts in sports (managers) and sports experts. Professional managerial and coaching staff in Serbia are trained by the College of Sports and Health, the Faculty for Management in Sports, et al.

3. The popularizing of tennis as a sport – Thanks to the successes of Serbian tennis players in the male and female categories, we can conclude that a large number of children are included in the training programs by way of tennis schools. It is necessary to build a strategy for young players to remain in tennis long-term, and create conditions for building tennis centers, such as the tennis center of N. Bollettieri in Germany, or the tennis academy of Justine Henin in Belgium. Building at least one tennis center would prevent the departure of young talented people from the country, which would give Serbia the possibility of creating competitive advantages in relation to economically
more developed countries. It is well known that economically developed countries are importers of a rare human resource (sports talent) which is the only one creating profit, securing work conditions and a chance for competing. By forming and developing such sports centers, conditions would also be created for the affirmation of sports management. Young, capable and educated sports managers would get the possibility to apply contemporary managerial concepts and secure efficient business ventures of such centers, while professionally trained tennis coaches would get the possibility to work with young talents. This means Serbia could achieve a competitive advantage also based on human resources, that is, educated and trained staff.

4. Investing in research in sports – Along with investments in the infrastructure and sports talents, also necessary are investments in all areas of sports, something that has been long neglected by the state. By forming good databases on sports infrastructure (the number of sports facilities, the year of building, kind and type of facility) the necessary information for building a strategy of development and promotion of sports infrastructure would be secured. If a comparison is made with developed countries (the gap between world powers and economically underdeveloped countries is also noticeable in sports), it is very easy to notice the country’s developing possibilities, which are investment in the infrastructure and research in all areas of sports. This would help to create a prerequisite for being included into a competitive race with economically developed countries.

5. Developing sports services in sports facilities – Sports managers who manage sports facilities must especially show their abilities, knowledge and skills by forming quality and attractive offers of sports services, particularly during a sports event, that is a sports tournament, as competitive advantage can be acquired also by way of superior and unique offer and services. An assessment of the rendered services is carried out based on past and expected results (the existing demand and offer, and the assessed offer), which gives managers the information for future activities. Based on this information, it is possible to comprehend how to promote and develop future services, which contributes to profitable business dealings, and creating changes, i.e. a service which will satisfy new public and personal needs. The task of sports managers is to properly and in due course notice the possibilities for development, and translate them into appropriate strategies which will be implemented into the services process.

In order for domestic sports organizations to match the results of their business ventures of sports organizations in economically developed countries, it is necessary for them to behave according to the model of organizations which learn and think in a systematic manner, have joint visions, nurture team learning and culture, and continually endeavor to improve and learn – learn by their own mistakes and those of others which then secures the key factors
for the efficient business dealings of every sports organization. In that sense, ‘benchmarking’ has a large significance for organizations (learning according to the model of organizations which are better) or in other words, collecting useful information about others which are better, applying superior work processes. A comparison with the best in the field, the gathering of information and knowledge on how they achieve high sports and business results and finding a way how to become an organization with high business results, enables and helps in finding the appropriate strategies for achieving even better results, and thus to create competition advantages.

Having in mind the existing condition of the majority of sports facilities in Serbia, which date from the past century, it can be concluded that there are great risks for management of utility areas, and a large risk of applying any strategy for their management.

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Summary: In order to function on the market successfully, every sports organization must permanently communicate with its environment. Considering their significance and large impact on the market, media outlets are undoubtedly one of the factors of influence for the success of every sports organization. The aim of the author of this paper is to define the media as a target group, a group which is an important instigator of the public; then to define the image of the organization as a personalization of the sum idea of the sports organization, to explain the way an image is formed and built, and finally, to define the positive and negative aspects of the influence of the media on the image of the sports organization. Due to their power and influence, the media are one of the most important target groups of sports organizations. They are a means of influence on the general public but also on individuals, something particularly important for the organization. Due to this, the paper explains in detail the role of the media in creating the image of sports clubs and organization, providing examples.

Key words: media, image, sports organizations, ethics, professionalism.
dependence of people on mass media informing has led to a somewhat extreme approach in the way that people believe that what did not appear in the media simply did not happen. Thus, the significance of the media for the work of sports organizations should depend on its activities. However, in the 21st century, there is no organization which can afford not to have a media presence in its environment. Independently from sports, the mass media has a large role in forming the attitudes of the public and creating certain social values. In a global sense, the mass media represent one of the most significant phenomena of modern society and are present in all areas of social life. In that aspect, the media must have not just the right to free and independent reporting and access to all information of a public significance, it must also have a specific social responsibility. The media directly or indirectly impact the forming of public opinion, and enable and facilitate the option for the society as a whole to be involved with a wide array of issues and problems linked with the area of media reporting on sports organizations and events, and the events forthwith. What is necessary to know is that the role of the media and mass communications in sports and sports organizations to present information is enacted not just in dailies and periodicals, but is also very relevant as some sort of legacy for the younger generations, primarily future sports workers and journalists.

Concerning the image of a sports organization, it can be defined as its depiction held by the relevant target groups. Image can also be described as an insight correlated with the quality of services which the organization is rendering, as well as its products and its way of communicating. The aim of building the image of a sports organization is the incurring of favor and support of the public for the organization and its products and services. The media represent the target group of the sports organization, which is the most credited for creating an image, due to its mass character. Except for this, they are also linked with attaining publicity, that is, they secure media coverage. In order to create a positive image, it is necessary for the organization to engage the media with the help of its public relations program. The aim of this paper is primarily to describe the problems involved with the role of the media in creating the image of the sports organization being presented to the public.

2. THE CONCEPT OF IMAGE AND IDENTITY

The image of each organization is its representation in the public, that is, the perception linked with the quality of services and the product, as well as the quality of communication. In other words, the image is a personalization of the total depiction of the organization, which can be reflected on the local sports organizations, especially those which attract a great number of members, fans and supporters. The desire to create a better public image in the purpose of incurring and creating new business opportunities and improving results
makes it necessary for sports organizations to build as good an image as possible through up-to-standard conduct towards users of products and services, suppliers, distributors, business partners and of course, the media. Considering that the majority of sports organizations in Serbia have undergone a severe image decline lately, it is necessary to apply the appropriate knowledge and experience for its improvement. The prerequisite for this is basic knowledge of the meaning and significance of a corporative image.

The corporative identity of an organization is its uniqueness and character. Specifically speaking, it is what the members of the organization believe to be the real picture of the organization. The most important role of identity is a positive impact on the reputation, that is, the status of the organization, based on which the first impression of the organization is acquired. This is how the organization is identified by the public, that is, according to the buyers, partners and other target groups. The building of the identity itself is an activity which enables a better quality of understanding between the organization and its target groups, by means of various types of presentations, the packaging, work areas, vehicles, equipment and marking.

The negative consequences of an identity of poor quality can be personified through negative financial business dealings and bad sports results, as well as a lack of interest on the part of the sponsors, which has been fatal for many sports organizations in Serbia. In order to avoid this, it is necessary to plan adequately an identity which would include the smallest details, such as the following: printing, designing work space and vehicles, the dress code of the staff, designing of physical identification, etc.

Of course, all this is insubstantial without sports results, but long-term, it can be a real competitive advantage in business dealings. Investigating, that is, researching identity, implies the analysis of its parts and appraising its influence on the organizational as well as competitive parts of a sports organization. A researcher of identity should first gather all the sources within the organization (list of players, ranking lists, annual business reports, press clippings), as well as outside of it (the reports of statistical institutions, tables, results, reports of research agencies).

What is relevant for researching identity is the support of top management, as well as the coaching staff. The opinions of athletes and the employees should be tested out directly (participation at work meetings and interviews, etc.), as standard interviews can often give a distorted image.

The type of ownership of sports organizations can also considerably establish their identity. As is well known, for the majority of our sports clubs, a clear ownership structure cannot be determined and thus, creating any kind of identity is a significantly more difficult job. Therefore a change of ownership can significantly change the identity of an organization, and this is where
the greatest challenge lies for our clubs after the finishing of the privatization process in sports.

As far as the type of identity is concerned, there are the following: (V. Filipović, M. Kostić, S. Prohaska, 2003, p. 182-186) unitary identity, the identity of commercial names and diversified identity.

In order to create a picture, i.e. an image of some sports organization, it is necessary to analyze certain data, such as:

- The place of the organization on the ranking list or table,
- Its advantage over rival organizations,
- Its position on the market,
- Its system of values and the conduct of employees,
- The relationship and communication of organizations and fans and vice versa,
- Internal communication and relations with the media,
- Social responsibility and relationship with the local government, and
- The relationship with sponsors, business partners, donors, distributors and government institutions.

2.1. The relevance of a sport personality’s reputation

For the promoting of the image of a sports organization, it is necessary also to exploit the character and actions of a famous personality or renowned athlete, who is a part of the organization. The relevance of the image of such a personality is reflected in the hankering of the mass media for such personalities and so-called celebrities. Due to this, athletes become show business personalities, as well as idols whose private lives, i.e. their privacy, come under close scrutiny, with the media promoting such a personality as a model for average people, especially youngsters. In this way, there is a true “auctioning off” of athletes, which is very often carried out by way of joint effort of the media and the PR services of the sports organization or club who has the athlete as their member. This cooperation is useful for the following: the club, the media and the players. Except for the athletes, also in the center of attention of the sports public are the officials of the sports organization or club. However, in Serbia and its surroundings, these kinds of personalities are mostly represented in a negative context.

**Sports coaches**, who are perhaps the most important category of sports workers in contemporary sports, represent an important factor in the image-building of a sports organization, as well as sports in general. Serbian coaches are very often in the shadow of sports officials and thereby in a certain subordinate position in the club in which they work. Regardless of the reasons which
contributed to this kind of relationship between the media and the coaches, it is a fact that it also directly reflects upon the image of the organization in which the coach works.

The image of these kinds of sports personalities is often not founded on realistic facts, but on the beliefs and misapprehension which these kinds of individuals create about themselves. Successful athletes, for example, had the skills to build an adequate picture of themselves, thanks to effectively adjusted performances, a good dress code and communication style. On the other hand, negative images can be changed, but the changes demand a coordinated and continuous effort by experts responsible for image-creating, that is, image designers who with their knowledge from the areas of esthetics, psychology and sociology contribute to the quality of this change. On the other hand, a positive image can with alarming speed turn into a negative one. This is especially noticeable when the press publishes some scandal involving famous personalities from the world of sports.

Except for the role of this personality category in the building of the image of a sports organization in the media, the reputation of the country of origin of a sports club or organization also has an important role in image-building. There is a correlation between the sports organization and its country of origin when the sports-marketing dimensions of the country’s image (the history of sports results, the infrastructure, young talents and experts, etc.) represent another relevant trait for the assessment of the specific quality and reputation of a certain sports organization. This correlation can be (D. Mihajlović, S. Ristić, I. Bojičić, 2007, p. 325) optimal, unfavorable, neutral, optimally neutral and unfavorably neutral.

3. THE CONCEPT OF THE MEDIA IN SPORTS

The media have a large role in forming the opinions of the public and creating certain social values. In that regard, the media must have not only the right to free and independent reporting and access to all information of a public relevance, but also a certain responsibility.

Sports journalism in Serbia has shared the destiny of the profession of newspaper and media journalism in Serbia. An increasingly occurring reason for this state of affairs is the fact that editorial work with young journalists is lacking, as well as the fact that there is constant pressure on the part of the editor for serious and responsible work to be replaced by sensationalism. This in turn produces a volatile fusion of sports and politics, where rhetoric, language and style are incessantly on the verge of scandal. In that regard, sports reporting in the electronic media and daily newspapers are today very similar to political reporting. All this can, as a consequence, deteriorate the image of Serbian sports clubs.
The media are also in a position to overstate or understate the extent of sports success or failure, and to present sports fans in a different light. These traits of the media within contemporary democracies highlight the fact that they give information on sports events, results and individuals, whether this involves players, multiple mediators, organizers, sponsors or financiers. They are capable of extending the extent of a certain event, talking or writing for days or weeks on an event which lasted several minutes or hours.

3.1. The role of the press in image-creating

The daily newspapers represent the most significant section of the press. Some of the advantages of daily newspapers are massiveness, the possibility to act locally, a large selection. The problems and negative sides of this, however, are that newspapers are most often discarded after being read, that they are read cursorily and recurrent bad quality.

Unlike daily newspapers, the main traits of professional journals or periodicals are the following: they cover a wide-ranging area, they retain the attention of a certain target group, that is, the public (in this case those who follow sports), the use of good quality paper, longer duration, etc. It is beneficial for the sports organization to advertise in professional journals, as in this way it can create a positive image of itself with certain target groups (e.g. a club newsletter). This type of specialized printed media presents a direct way of conveying a message to the target group. Like specialized sports columns in daily papers, club newsletters address a certain group of readers and are already adapted to their needs and interests. In certain cases, they benefit from a greater confidence by the readers than the daily papers, as they inform the public in more detail on the activities of the club which they represent. The only flaw of these kinds of journals is their subjectivity, though this is to be expected, in view of the target group concerned.

One of the examples of a local club paper is the newsletter of the Partizan fans, the Go For Partizan. It was founded three years ago and conceived in such a way that everyone who loves and supports Partizan finds it interesting. It relies primarily on texts and reports on the current affairs in the football club, as well as other football societies. Also, there are interviews with athletes and club members, the results of senior and younger categories, as well as reports and photos of supporters. A special type of functioning of this media is also the possibility for the readers themselves to create the editorial policy. To be more precise, the readers are allowed to be part of the newsletter and improve its work by sending pictures, letters, reports or suggestions.

What especially increases the rating of the newsletter, and thus also the rating of the club, is the existence of the newsletter’s website, which has
significantly improved the quality of the editorials. Thanks to this, an on-line shop of club and supporters’ equipment was successfully organized, enabling a larger access of products with the recognizable visual identity of the club. Also, there is on the site an archive of reports from matches from the previous season, along with an inevitable photo gallery, and the editorial board endeavors to publish the newest video clips on the social network YouTube. Along with all these, there is also an official forum with sports and supporters’ topics on the topic, on which the readers, or the fans of Partizan, can exchange impressions and opinions linked with their favorite club.

3.2. The role of the radio in image-creating

It spreads to all social segments and is owned by the majority of people. The main advantages of conveying messages via the radio are the following:

- The human voice – due to the direct effect, sincerity and individuality,
- Until recently, the quickest means of oral informing,
- A greater psychological effect – a stronger effect is left on the recipient,
- Radio messages and broadcasts can be heard throughout the whole day.

As far as the flaws of this media are concerned, most often there is resentment due to the following: overlong messages for broadcasting, sudden program interruptions and frequent aggression in the messages.

Announcing the news can also be done directly from an audio tape, sent to a radio station. In this case, two forms of messages are represented, that is messages which an unidentified speaker has recorded, or the voice of an identified speaker, which is a much better type of transmission of the delivered material.

Concerning the relevance which the radio as a medium has in creating and making the image of a sports institution, the best form of promoting such an organization is the club radio. A steady covering of all club matches and the newest information on club activities via the radio signal is very significant in the purpose of informing target groups, but it is also very optimal for cooperation with sponsors, by way of granting advertising space. Maybe the best example of such a radio station in Serbia is MIP radio on 93.7 FM, also a part of the media group of the Partizan football club. The radio station has existed for ten years and is one of the most popular stations. It covers the wider area of Belgrade and its surroundings, for which it has a regional license. This involves a musical-sports radio station which, except for the promoting of Partizan, also offers to its listeners quality music from abroad, as well as Serbian music, which is specially represented in the night program. Except for direct broadcasts of all the matches of FC Partizan in the country and abroad, MIP radio has also covered many important music events in Serbia.
3.3. The role of television in image-creating

Television, as a form of mass media, has become an excellent means for sending the advertising messages of large world corporations and multinational companies throughout the transmitting of the most popular sports events, but also covering famous sports clubs and organizations. Club television channels in contemporary sports are starting to take up an important place in building the image and identity of the largest and best sports groups in Europe, most often football clubs. One of the examples from abroad is also the model of television channel of the football club Arsenal, which is also a rival of Partizan in the group stage of the Champions League.

Arsenal TV is a sports TV channel, dedicated to following the football club Arsenal from the UK. It was part of the Setanta Sports package, similar to other channels from the same package, such as Celtic TV, Rangers TV and LFC TV. The TV station started to work officially on January 14, 2008, on SKY channel. The channel itself contains a shot of every Arsenal match in all competitions, exclusive interviews with the staff and players, a direct broadcast of the match of Arsenal’s reserve players and friendly matches of the first team, events from the Arsenal Academy and the matches of Arsenal Ladies Football Club, the latest news, reminiscences of famous Arsenal matches and documentaries based on club history.

In our country, the only known example of a sports TV channel is TV CITY 1, the television station of the Partizan football club. The TV program is of a sports-musical character, lasting 24 hours non-stop, with reruns of club matches. A significant place is taken up by shots of great past matches from the archives, sports news, interviews with the club’s legends, but also with young and prospective athletes from Serbia, Partizan supporters. The strategic plan of the TV station is to rapidly cover Southeast Europe and the Balkans. Taking into consideration that this station was founded only a few years ago, one of the main criticisms is the name itself, which, according to the opinion of the author of this paper, is rather impersonal and without any similarities to Partizan. Nevertheless, considering that this is the only sports club TV station in Serbia, along with the existing potential, there is room for expansion and progress, which would be exceptionally useful for the entire football club, as well as for Serbian football in general.

3.4. The role of the Internet in image-creating

The Internet offers a different way to experience sports. In sports, this communications media is most often used to follow the news (news broadcasts,
results), or listen to sports broadcasts (pre-recorded, as well as live matches), for education (sports blogs, educational sites), for sports betting (on-line gambling), exchange of information, communication, etc. The Internet makes it possible for sports lovers to have virtual access to sports in real time, as well as facilitating a way of interacting with the sports organization itself, and with other sports lovers.

Research shows that consumers use new technologies (the Internet), in order to satisfy their emotional and cognitive needs. These are categorized as the need for information, need for entertainment (fun), and the need for socialization (social networks). Interactive media such as the Internet offers individuals access to an enormous amount of easily accessed information (results, statistics, commentaries, games, forums, chatrooms, fan groups, etc.), as well as the possibility of active participation. It provides the individual with entertainment, as well as the possibility of active participation. It also provides amusement, as well as a certain type of socializing.

Internet sites, among other things, also enable the distribution of controlled messages and information. These messages perhaps lack the power of those conveyed face to face, but nonetheless there is a possibility to deliver the controlled message (information) to the mass public, and to gather feedback information of a large number of people (visitors), making the Internet a very valuable tool for public relations.

Considering that in contemporary communication there is an increasing supremacy of dialogue instead of monologue between sports clubs and organizations, the social media are slowly taking over as mediators in that relationship. As is well known, the social media are most often used by young population, in which there are a large number of fans and supporters of sports clubs, teams and organizations. However, lately the influence of social networks has also spread to other generations, turning this kind of media from a means of entertainment to a business device.

A review of the recent history of development and transformations from Web 1.0 to Web 2.0 can be explained in short. For Web 1.0 it can be said that it mostly involves a way of reading and writing articles and information. This means that a certain brand, person or company makes sites and creates the contents. The use of Web 2.0 has drastically changed this situation.

Web 2.0 is an involved, conversational, social and decentralized website. From the various new benefits, the most important are the possibilities to communicate with people more easily, as well as an unbroken generating and sharing of multimedia contents via the Internet. Generally speaking, the transformation and progress is obvious, from independent activities to a series of shared, involved actions, enabling the use of new kinds of applications, technologies and methodologies.
A sports organization can become a valid media attraction by creating exclusive multimedia contents. In that way, the organization leaves a broad social impression and makes a connection with the fans. Clubs and organizations become more accessible and can promote sponsors, having an authentic and direct interaction with their supporters and fans and creating an accumulative influential effect.

Defining the Web 2.0 application:
1. Sites and platforms for social networking (Facebook, My Space)
2. Generated user contents (YouTube, Wikipedia)
3. Platforms for assessment, marking and social bookmarking
4. Platforms for microblogging

Rapport with supporters through social media has experienced a real revival through a new type of authenticity. Clubs, athletes and entire leagues and competitions have and become more transparent, realistic and authentic for their fans with the help of these platforms. Fans can get an insight into the appearance of popularity and a chance to make on-line friendships with the profiles of favorite clubs and athletes.

4. THE ETHICS AND PROFESSIONALISM OF THE MEDIA AS A FACTOR OF IMAGE-CREATING

Lately, the media have switched from informing to creating scandals, whereupon the ethical codes of journalism are becoming less and less important. Whenever the expression “media ethics” is mentioned, it is without doubt that many with say with derision that this is an oxymoron. Lecturers of media ethics are already used to puzzled looks and incredulity, when admitting that they are involved with something that seems like pointless academic effort. The quandary “the truth or ethics” is also something which most journalists face on a daily basis. Even though the “truth” is probably the oldest and most respected ethical principle of civilization, in the journalist profession it has become a very variable conception. At the beginning of the 20th century, in the ethics of media reporting, a new concept made an appearance: namely - privacy. This concept has brought new problems and disagreements between the journalists and reporters on one side, and individuals and organizations which are the focus of the media on the other.

Professionalism and ethics in the media should come at the very commencement of the course of action, at the moment when the owner of the media employs a journalist to do his job. It should be par for the course that the owner of the media, regardless of whether it is a question of a private owner or the state, will supervise the professionalism of his/her employees. However,
it is obvious that in the given triangle (professionalism and professional ethics, market demands and creating profit) there are certain deviations within the profession of journalism. The creating and accumulating of profit have at a given moment become the only standard and criterion for business dealings, overshadowing professionalism and ethics in journalism. The damage to professional journalism started to be inflicted at the beginning of the 90s, with a culmination in the last decade, at the time of forming ownership over the media, when the politics of indulging chosen political interest groups dominated over the journalist profession. The decisive criterion for employment became for the media owners political suitability, rather than ability. In the last couple of years, alongside politics, the advertising industry started to make an impact on the media contents. The reason for this is the fact that Serbia is still in the stage of media commercialization, within which media contents adapt to advertisers, as media owners profit the most from them.

Nevertheless, perhaps the worst thing of all in journalism is that in the seeking of scandals which increase ratings or the circulation, there are no rules, and the victims of the scandals are practically anyone who is appropriate. Unfortunately, there is a similar situation in sports as well. It is the most famous athletes and sports workers who are besieged by the media, especially if good results are lacking. One of the most recent examples is the participation of the Serbian football national team at the 2010 World Cup in South Africa. After their failure in the group stage, along with impartial commentator criticism on the field, there was an expose in the newspapers that certain Serbian football players had partaken in alcohol and nicotine the night before the match with Germany. Along with the comment that the shots and photos were taken from the Russian site under the title “They drank, they smoked, and Serbia they ruined!” an article was also published by the Pres daily and other national tabloids. The Pres cited that five of the football players were caught the night before the match in consuming damaging agents, while watching a football match in their hotel rooms. As can be seen, the Serbian media outlets are no exception when such issues are in question.

The English media are often singled out due to their unscrupulous conduct in the expressing of public condemnation of English athletes. Certain football players were focused on, as well as the selector of the English team, Fabio Capello. The media gave much grief to the goalkeeper of the national team, Robert Green, whereupon the goalkeeper became the target of vile criticism by commentators in some English papers, due to a notorious blunder which cost the English team the match against USA in their first World Cup match. A number of incendiary headlines appeared a day after the match: one of the most obvious, Hand of Clod, could be found in two tabloids, the News of the World and the Sunday Mirror.
5. CASE STUDY: THE INFLUENCE OF THE MEDIA ON THE NEGATIVE PUBLIC IMAGE OF THE FC PARTIZAN DURING FAN BOYCOTT

Through its history, Partizan has proven to be one of the most awarded clubs in this part of Europe. During the existence of Yugoslavia, sports success has provided Partizan with the status of one of the clubs that used to constitute the former famous Big Four, with an enviable European reputation. The breakup of the country, a general social crisis, but also the success of the Red Star FC, have shaken and jeopardized the already formed image of the “black-and-whites”, an image of a club without any national prejudices and with worldwide and urbane fans. According to the opinion of the majority, in spite of the club’s identity crisis and with the exception of its “great rival”, a blessing in disguise is that the potential competition did not actually exist.

Alongside with the “eternal rival” and compared to the other clubs and organizations, a certain kind of domination over the sports public and media was retained. The crisis of good results in European matches hardly affected the media exploitation of the club. At that time, but also during the existence of the former Yugoslavia, state representatives were at top positions of the sports clubs, which was some sort of guarantee of a good reputation and regular media coverage. Unfortunately, the countrywide reputation during the 90s was not transferred to the European level. In that period, a bad rapport with the UEFA was reflected in the way foreign clubs reported on Serbian clubs, in which, the Partizan FC was mostly mentioned in the context of the outbursts of its fans. With the comeback of some former players and with the arrival of the first foreigners in the team and the coaching staff, the club was restructured, which in turn contributed to its first qualifying for the largest European football club competition - the Champions League. However, the upgrading of the image did not last long. Soon after, the greatest success of the club in modern times was followed by a crisis, probably the biggest in the club’s history. With the defeat from the Artmedia football Club during the Champions League qualifications in 2005, began the toughest period for both the club’s business activities and its image. From that day onwards, Partizan suffered from certain negative developments coming from the public, the media and even from the most loyal fans. Under the attack of the media and the rest of the public were mostly the club officials, while one of the most unpleasant examples of this was a series of articles in the Tabloid journal that were later compiled into a book entitled “The Glory and Misery of the Sports Mob”, written by Milorad Brkić. Along with general issues of abuse in sports, many texts were devoted to the dubious business activities of the club’s management. Irregular transfers of players during the late 80s and early 90s were mentioned, and there was also
mention of the founding of various companies and their activities under the club’s endorsement, as well as tax evasion and the fixing of results.

In the segment of the book that mentions transfers of the players in the early 90s, there are also references to the agencies which supervised the transactions. There are also numerous examples of similar transfers of the players within that timeframe and they are described in details in articles of the Tabloid journal, as well as in the mentioned book. Apart from the sale of football players, the journal also cited some European matches of Partizan. Regarding this, in the part of the book or article in Tabloid no. 27, dated March 14, 2005, the example of the alleged intended rematch between Partizan and Roma in the UEFA Cup in October 1988, was cited. The book also mentions the Joker sweepstakes organized by fC Partizan, while the Tabloid claimed that the sweepstakes, offering two apartments and a business space in Belgrade as the two main prizes, were fixed. At the time, the journal also wrote about the latest dealings related to fC Partizan, an example of which was given in issue no. 26, dated March 2005, about the transfer of the most talented player of Partizan, Simon Vukčević. The young player, who was an occasional national team player, was targeted by some of the largest and financially most powerful clubs. However, the quickest to acquire this player was the Russian club Saturn, which was at the time number 11 in the Russian Football Championship. According to the journal, the transfer was under preparation for a while and was kept as top secret until the Russian Club announced the news on their official site. The Russians also uncovered that as part of a four-year contract, Vukčević would get half a million Euros, while Partizan fC would receive a recompense of 3.5 million Euros. Sources close to the club claimed that only six months prior to this, Vukčević was offered as much as 8 million, but the management had turned down the offer. The text posed the question why the apparently unfavorable offer was accepted in spite of everything.

Within that period, the articles and commentaries about Partizan officials became increasingly frequent, as well as progressively more negative. One of the many examples is the text published by Slobodan Georgijev about Žarko Zečević (zec=rabbit, bunny) under the title “A bunny in the shadowy woods”. The text is about the entire working career of Zečević, after he withdrew from sports. A standard presentation of his work in the position of the club’s Secretary-General was given, from the very beginning of the 1984/85 playing season. Thus, it was cited that after his arrival in the club, Partizan became “an important club” once again, but not so much due to the results, but due to new players. The grounds for the allegation were the liaisons with state officials of the time, who also held certain positions in the club. This was the basis of the building of an empire which Zečević endeavored to do, by founding various companies in partnership with other officials of the club and sports society. In addition, the text also quoted Zečević bribing the players
and fan leaders who were often an inevitable part of every Partizan delegation and expedition abroad. References to his contacts with the underground were made at the end of the text, which correlated to a subsequent boycotting of all of Partizan matches on the home field.

All these allegations and information, which are only a small fragment of the reports on the biggest crisis of Partizan FC of the time, greatly contributed to the decline of the club’s image and reputation. Perhaps the best analysis of the situation in the club is the one carried out by the B92 Sports Editorial Office, dated July 19, 2007, entitled “FC Partizan - Year Zero”. It describes in detail the club’s path, starting with the Champions League Qualifications to the 2007-2008 playing season, when the fan boycott was ended by the resignation of Žarko Zečević. In short, the club’s business activities throughout the seasons were exposed and the devaluation of the team during the fan and publicity crisis is obvious. The crisis had inflicted huge damage to both the image and business activities of the club in general. Generally speaking, these were the most difficult moments of the Partizan FC history.

6. CASE STUDY:
A MEDIA PRESENTATION OF THE SUCCESS OF THE BC PARTIZAN

Except for the turbulent past of the football club, there is a section related to the YSA (Yugoslav Sport Association) of Partizan that can be distinguished as special in many ways. This involves the Basketball Club Partizan that, unlike many sports clubs, has an admirable tradition. Many texts have been written and published on their successes, historical victories, but emotive loss as well. The reason for this is mostly the club’s success in the Euroleague Basketball competition - the contest in which the BC Partizan participated with the lowest budget and investment possibilities. In spite of that, good results have become a permanent constant, which is rarely the case, not only within national sports, but generally speaking also. That continuity of excellent results has been recognized by the media, starting with sports outlets and with the daily newspapers with the highest circulation, the most visited internet sites, and the most popular national TV stations. The beginning of that media scrutiny started on the SOS TV Channel in the sport shows of journalist Vladan Tegeltija. In his columns on the website kosarka.rs, respect for the success of a sports club is more than evident. Another illustration of this is his column published on March 24, 2010, after Partizan’s victory over the Israeli team Maccabi in Tel Aviv in the Euroleague quarterfinals, with the title “Nokia on Silent”- alluding to the name of the Maccabi sports hall (Nokia Arena). The column glorifies the basketball players, coaching staff, the management and the friends of the club, with the obligatory reminiscing of the good old times.
Regarding the final qualifications of Partizan to the Euroleague’s Final Four, a similar column was published on April 2, 2010, entitled “The Unprecedented”. Still, perhaps the biggest commendation to the sports organization are its results and the fact that is has become a model of success for all the other professions and businesses, as well as for state affairs. As regards to that, Srdjan Pešić’s column appeared on February 2, 2010, in the regional daily newspaper The News from the South with the title “Bread and Partizan”, whereupon the success of Partizan is identified with the experience of the October Beer Fest in Munich and with the abolition of the visa regime for Serbian citizens. Perhaps the best promotion of a club is when it is being distinguished for its rich history. In the case of BC Partizan, there are numerous texts and analyses. One of many was published in the daily newspaper Blic on April 26, 2010, under the title “Baskets with the sound of sirens for the joy of nation”. Namely, the text represents a symbiosis of the Partizan and Serbian national team historical scores in big competitions. By glorifying the success of BC Partizan in these texts, as well as in TV shows and various analyses in the last two decades, the media has significantly contributed to the upgrading of the positive image the club has already. With this, the club is sending a message to the society at large that every effort is worthwhile.

7. THE FACTOR OF MEDIA REPORTING ON VIOLENCE IN SPORTS

In the last few years in Serbia, it has become very popular to merge the genres of sports and violence in sport reports. The sources of information, as in politics and crime columns, are referred to as confidential and reliable, coming from allegedly known and prominent parties that are, in fact, anonymous. Beside them, also exposed often are lawyers, various representatives, as well as family members when on trial for bullying and hooliganism during sports events. The media also participates in the relativizing of not only different types of violence, but also their legal sanctioning. On the other hand, they are also responsible for the lynching of the sports clubs due to the violent behavior of fans, although it is well-known that this is the domain of the police force and the prosecutor’s responsibility.

Campaigns such as those against violence and violence promotion in sport, can certainly affect some media outlet to stop writing about the chanting of fans and to participate more actively in the real resolving of this issue. Respecting the ethic code of journalism not only in questions of sport and in the accompanying violence is mostly a matter journalists or their associations should be taking up. In regards to that, a survey was carried out of the news broadcasts on the most popular TV stations in Serbia. The keywords were “violence”, “violence and football”, “violence and basketball”, “violence and
fans”. The TV stations surveyed were as follows: RTS 1, TV Pink, TV B92, TV Fox, TV Studio B and TV Košava.

<table>
<thead>
<tr>
<th>Issue</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
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<tbody>
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<td>Violence</td>
<td>128</td>
<td>273</td>
<td>143</td>
</tr>
<tr>
<td>Football</td>
<td>21</td>
<td>48</td>
<td>18</td>
</tr>
<tr>
<td>Basketball</td>
<td>18</td>
<td>23</td>
<td>5</td>
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Table 1: Research of news broadcasts
(Darko Bošković)

Violence in sport is, without doubt, one of the most powerful generators of the current bad image of Serbian sports clubs and organizations in general. It is very typical how the increasing of violence, especially in football and basketball, directly affects the number of texts about violence. In order to put things in order and the society into a state of civilization and normal life, there is a necessity not only for the media to become independent, but also for professional journalist associations to impose the ethic code which would forbid putting so much emphasis on violence in sport.

The question is, have modern journalism and modern sports lost their passion and need for catharsis, which they are trying to regain through the sensation of violence, and is the violent behavior of the fans a substitute for the promoting of sports organizations through sport achievements and stimulating competitions. Surely, the media cannot invent the riots and violence which plague our greatest sports clubs. In reality, it is hard to imagine that sports clubs would plan the violence on their own and at the expense of their own image and identity. There is, however, a quite obvious connection between the media’s stimulating of fan violence and athletes who opt for violence on the sports field, as well as a connection between the position of sports organizations and society towards this phenomenon. An example of this can be the case of the attempt of murder of the police officer Trajković at the match between Red Star and Hajduk that caused adverse reactions of fans on the stands, as well as in court. It seemed that the media, from the internet and the electronic and print media, can hardly wait to announce a danger from the reactions of fans at future matches and thus overshadow the football club and its results. This causes extraordinary concern on the part of Serbian clubs and sports organizations. Their effort to improve reputations through sports results and various marketing campaigns can be easily counteracted by endorsing hooligans as the main characteristics of the clubs.
Without questioning the veracity and validity of such a large number of negative texts, TV shots and reports, there is no doubt that providing so much media space for hooligan violence damages not only the image of the club as an institution, but the positive attitude towards national sports in general.

8. CONCLUSION

Creating an image, something that can be carried out without taking any action whatsoever, represents a demanding and long-term job that requires, as any other business activity, a clear delegating of duties and competencies. Smaller organizations opt for one person who is in charge of public relations and image-creating, as well as marketing and advertising. That is not the case with the larger organizations, who often hire an adviser to create an image which will correspond to the identity (or up one notch). Firstly, for this purpose an analysis has to be made of the present situation that takes into consideration the current image in the media, as this is the most important part of publicity. Furthermore, the significance of starting newspapers/organs and media outlets is an important factor that image designers have to consider as well. The unavoidable point in the image-creating process, explained earlier, is the presentation of the organization by all the leading networks, mainly for the sake of the younger and more educated population, who are at the same time the most interested in every kind of consumption.

At the very beginning, the image-creating staff has to make the decision on whether they are going to present the real situation to the board of the organization, that is, to its top management, or use flattery and present the current situation according to expectations. Taking into consideration the reputation of Serbian sports organizations in the public and the media, the people in charge of public relations and image creation will have their work cut out for them.
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The authors are responsible for the data in the papers and must adhere to the standards for the designing of the texts and interpretation of results. The papers are submitted exclusively in electronic form. The texts are send in the MS Word program, using the Times New Roman 12pt font. The papers are written in Serbian and their size should not exceed 15 pages, including all tables, diagrams, charts, graphs and references. The texts are usually monospaced, and all four margins (upper, lower, left and right) are 3 cm.

In order for the journal to also be accessible to the international public, the editor has decided to publish the journal in two languages, so it is necessary for the authors to send their work in English as well.

STANDARDS FOR WRITING RESEARCH PAPERS

First page
On the first page (which is not numbered) state the following: THE TITLE OF THE PAPER, the first and last name of the author, the titles, the institution in which s/he works, the address, phone number and email address.

Second page
On the second page (not numbered) include the ABSTRACT, between 150 do 200 words long. The abstract must contain a precisely defined subject and topic, a short description of the applied research procedure and the most important results reached. The abstract is sent in both Serbian and English.

The Key words are included under the abstract. There should be no more than 5 words.
TEXT STRUCTURE

The text of the paper should begin on the following page. All pages are numbered (from 1 to 15).

Original scientific papers should include the following elements: 1. the topic of the paper, 2. the method, 3. the research results, 4. the discussion, 5. the conclusion and the references.

* How to write the INTRODUCTION
- Precisely define the topic of research and link it with the broader scientific framework in relation to the validity and relevance of the issue.
- Give a shorter review of the more relevant previous research which is directly or indirectly linked with the research problems. Include the references.
- A short explanation of the basic concepts can be given for those less familiar with the topic matter.
- All the mentioned elements represent a distinctive whole (chapter).

* How to write the METHOD
- Give a detailed description of the methodology, define the sample of respondents and explain the observable variables.
- Every instrument used (survey, interview, scale, test et. al.) must be shown in its integral form or illustrated in a shortened version. The testing procedure can also be illustrated by photographs.
- Briefly list the choice of statistical procedures and the applied application program.

* How to interpret the RESEARCH RESULTS
- Present in brief the main results with a short and clear explanation.
- It is desirable to use tables and diagrams.
- It is possible to separate the text into chapters depending on the nature and complexity of the data.
- If smaller chapters are used, create precise titles for them.

* What the DISCUSSION should consist of
- Comment on the results in relation to the expectations and previous research.
- Give an explanation of the results (misconceptions, dilemmas, projections, implications and similar).
* What the CONCLUSION consists of
- Briefly describe the research, and then concisely and comprehensively reveal the main results.
- Mention the possibilities of a practical application of the obtained results.

* How to compile the REFERENCE LIST
- Use the APA referencing model (http://www.apa.org/journals/webref.html)

If the paper is written as a review paper, there can be deviations from the suggested structure for the text of original research papers. The author will adapt the structure to the contents of the prepared material, taking into account the proper marking of the chapter and subsections. The numbering is the same as with the original papers (1. XXXX, 2. YYYY, 2.1. YYYY, 3.2. YYYY, etc.). Every claim, new classification or synthesis of previous findings should be based on the results of the research. The basis for writing the review papers is the bibliographical-speculative method.

**Designing and marking tables**
- The tables must be simple and easy to understand.
- The data analyzed in the text should not be repeated in the tables.
- Refer the data mentioned in the tables to the text in the paper.
- Number the tables (for example: Table 1, Table 2).
- While marking the tables, after their numbering, make a mention of the data in the tables.
- The number and title of table are written above it.
- The tables are always marked and numbered in the same way.
- The tables are an integral part of the text.

**Designing and marking diagrams**
- It is desirable to include in the paper diagram, charts, graphs, et al.
- The data analyzed in the text should not be repeated in the diagrams.
- Refer the data in the diagrams to the text in the paper.
- Diagrams are to be listed by number (e.g.: Diagram 1, Graph 1).
- After listing, mention the data they contain.
- The numbering and titles are written under the diagram, chart, graph, et al.
- Diagrams are always numbered and marked in the same way.
- Diagrams are an integral part of the text.

The use of the APA referencing style system
- References are in alphabetical style, by the author’s last name.
- Each reference is numbered.
- In review papers in which multiple references were used, the citations can be marked by the number of reference acknowledged in the reference list.

Examples of papers in periodical publications (journals, bulletins, etc.)

Examples of non-periodical publications (textbooks, monographs, scripts, books, etc.)
Author, A.A., Author, B.B. & Author, C.C. (year): Title of research paper. Edited by: Editor

Examples of chapters in non-periodical publications (textbooks, monographs, etc.)
Examples of references published in journals, from congresses and symposia

Author, A.A., Author, B.B. & Author, C.C. (year): Title of chapter. U: A. Editor, B. Editor, C. Editor (Eds.), Name of conference, congress or symposium (pp. xxx-yyyy). Published by: Editor


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