ASSESSMENT OF MOTOR INDICES FOR DETERMINING THE PROGRESS OF SPORTS TRAINING

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Abstract. *Sport, in addition to developing physical skills, has numerous psychological and social benefits. Important life skills, including collaboration, goal-setting, problem-solving, decision-making, leadership, time management, and cognitive, emotional, communication, and social abilities, may all be taught to young people through it. A special place is given to the psychological research on training in the context of performance sports, which borders the physical education departments and adds valuable knowledge and strategies to help achieve the desired outcomes. Research on competitive performance is becoming increasingly time-consuming but also very beneficial to coaches as well as sports psychologists. Age, weight, muscular mass, and flexibility all have an impact on athletic performance. Success is dependent on work and interest in the activity, along with the previously listed qualities, so we would want to go deeper into the subject at hand. In this article, we start with the theoretical premises, but also based on personal experience over many years, that the method used for psychological planning in general, as well as the use of mental preparation techniques, can make the distinction among athletes and significantly improve sports results. As a result, I believe that well-designed research can help identify and capitalize on athletes' psychological and social potential in training as well as competitions, as well as evaluate and improve the efficiency of applied study techniques and methods, which are described in detail in the methodology section.*

Keywords*: physical education; physical skills; mental preparation; techniques; athletes.*

Introduction

"Top" teams can be identified by their superior technical-tactical organization and intricate, meticulous approach to each phase of the game, which are evidently the product of extensive training preparation. In this situation, it is critical to look for practical ways to streamline the sports training process and boost athletes' potential.

To carry out certain game activities, moral-volitional characteristics, basic or specialized motor skills, and motor qualities compete simultaneously. New and intricate linkages between motor skills and abilities emerge throughout gameplay, resulting in the development of both. The positive transference of knowledge, skills, abilities, motor characteristics, and other components of the training process can also be facilitated by conditioning and inter-conditioning connections.

For football players, the substance of training regimens is largely determined by the accurate information obtained through the registration of competitive activity. It is advised to employ effectiveness indices as well as technical and tactical performance metrics to assess sportsmanship.

In order to comply with team management criteria, each player's contribution to the team as a whole and the training process's direction must be properly considered.

The need for players to receive comprehensive and advanced training is one of the main concerns of contemporary sports training researchers. Today, developing a squad of athletes of

the future is considered a top priority, broadening the scope of young talent's meticulous preparation. This fact served as the main basis for selection and introduction to sports throughout youth.

The aim of Coutinho et al. (2016) is to make a number of contributions to the field of systematizing the instruction of sports training components according to the age and distinct qualities of athletes. The content and methodology of athletic training have advanced in tandem with improvements in athletic performance.

As a result, the systematization of the material covered in sports training underwent substantial modifications, and this process was conducted in compliance with strict guidelines, norms, and regulations.

One of these guidelines seeks to clarify the function and impact of physical activity, which is a crucial part of sports preparation.

In order to fully realize athletes' natural inclinations and ensure that they perform at the highest level in sports within the ideal age range, junior football players' long-term training regimen must be structured and phased according to the patterns and principles of establishing the highest standards in sportsmanship **(**Enoiu, 2015).

Enhancements to technical and tactical training ought to be well aligned with the degree of development of various motor skills, prevent the development of severe motor skills, and vary widely.

Results from competitions are also important, but they shouldn't have a dominant style because the main goals of the games should be for students to have fun and appreciate the value of both individual and group work. The second stage's goals can be achieved by using complex tasks. When an athlete reaches the stage of training for significant success in sports, all of their functional systems have developed, guaranteeing a high working capacity and immunity to the negative consequences of hard training (Papp et al., 2019).

The duration of this stage is tied to both the unique developmental characteristics of children and the general patterns of sports training, as the human body continues to develop until the age of 20–23. For optimal outcomes, the stage should conclude when the athlete reaches the lower end of the age range, if that is possible. It is critical to establish circumstances where the most intense and challenging physical outcomes, tactics, and technical training align with the time when football players are most likely to achieve the best results (due to the body's natural development and functional transformations as a result of long-term training). At this age, soccer instruction and learning are carefully prioritized.

The development of models for annual programs based on years of research was made possible by an analysis of the scientific and methodological literature as well as training programs used in nations with advanced football development (França et al., 2022). This allowed for the regulation of training sessions and competition cycles.

The basic structure of a year's training is already in accordance with what would be employed when training for the maximum level of athletic performance at this point of long-term improvements. The sole difference is that the entire training time period of each regular macrocycle will typically be shorter.

It is shown that the establishment of a long-term training program for young footballers should be carefully connected with qualitative modifications of three interrelated factors that are crucial for the growth of youth and reserve football (Barbu & Stoica, 2020):

1) the competition systems (competition modes and formats); 2) the trainer training systems (training content); and 3) the training system (training methodologies, training technology).

According to Ascenzi et al. (2020), the research findings reaffirmed and demonstrated that the training process's goals, objectives, and content should be naturally integrated into the competitive system for football players' long-term development.

The football players' long-term training program's technology is user-friendly and functional, with its foundations being:

- broadening the scope of initial training by determining the best age intervals for each stage of the long-term training;
- putting in place a phased system of technical-tactical training;
- introducing health-promoting physical training techniques;
- switching from a uniform, methodical approach to a customized system of training process organization;
- introducing a logical system of competitions for children and youth; putting into practice the methodology for the integral evaluation of young football players' motor skills; creating objective criteria for assessing children's coaches' performances; implementing a unified training program and advanced training for coaches, which would ensure the use of contemporary training technologies; rearranging children's competitions and, in particular, reconsidering training strategies and, consequently, positions in the coach-trainee relationship system; and establishing criteria for assessing the effectiveness of children's coaches' performances.

As a result, the training regimen provided to the sportsmen includes psychologically strengthening workouts in addition to physics, technique, and tactics. Aside from that, the public's pressure also has a significant role. If the public supports the athlete or his team, or vice versa, they can have a very beneficial impact.

The primary causes of stress in performance sports are:

1. Qualities of personality: Anthracites, perfectionists, and self-sufficiency are a few personality traits that can affect this stress level.

2. Type of task: Activities that are thought to be more demanding or stressful, including performing in front of big crowds, can raise the soccer player's stress level.

3. Social support level: A soccer player's stress level can be lowered by receiving social support from their family, friends, and coach.

4. Health and degree of weariness: An athlete's stress level may rise in the event of poor health or elevated levels of fatigue.

5. Environmental variables: An athlete's stress level can be impacted by environmental elements like temperature, weather, or noise level.

6. Pressure from the coach or parents: An athlete's stress level may rise in response to the coach's or parents' high expectations and pressure to perform well.

7. Confidence and self-assurance level: In sports, a lack of confidence can result in elevated levels of stress and anxiety.

8. Past trauma or injury: An athlete's stress levels may be negatively impacted by their past trauma or injury.

9. Sports experience level: Less experienced athletes may be more vulnerable to competition-related stress than more seasoned athletes.

10. Coping strategies: The way an athlete controls their emotions and stress can have a big impact on their level of stress resilience.

11. Effect of stress on athletic performance.

Sport psychology is essential since increased stress during workouts and competitions can cause athletes to react negatively on both a physical and psychological level, perhaps leading to a decline in their abilities.

In developing the paper, I began with the premise that technical-tactical training is a crucial, differentiating factor that can optimize the football game, impress the worth and character of the team that masters this component, and can subtly result in an increase in performance capacity.

By working with Romanian football teams and academies throughout time, the project aims to provide theoretical and methodological underpinnings for the selection of football players in the First League.

Soccer players can show a wide range of emotions during games, both positive and negative. In many situations, these motivational strategies are advantageous since they support athletes in pushing past personal boundaries and inspiring themselves to reach goals. Motivational theories of personality have always placed a strong emphasis on how people and circumstances are inextricably linked to the prediction of behavior.

However, motivational notions bring a dynamic element to the interaction between the two that is missing from traditional theories of personality traits, in addition to offering a natural person-situation key in behavior prediction (Fletcher et al., 2016). The foundation of any competitive sport is a spirit of competition. The potential for victory in contests gives participants greater vigor and motivation to get ready for the challenges of the next competitions, to raise the level of demands and intrinsic motivation of competitors.

When the main tournaments from the past few years are examined, it becomes evident that football is a dynamic sport that is being adopted by an increasing number of nations across the globe.Football games have the potential to grow at the club and, consequently, competitive levels due to factors including practice conditions, game rules, and affordability.

This research's primary goal is to examine and evaluate the viewpoints of professionals in Romanian football, particularly regarding the importance of the selection process of football players in League I, on the example of FCSB.

The purpose of the exploratory research was to gather and compile a variety of data about the technical-tactical organization of two football teams: FK CSKA 1948 SOFIA, a European team, and F.C.S.B., a Romanian squad. Additionally, we aimed to identify the differences in collective technical-tactical behavior between two "top" teams and a Romanian club team through comparative study. This would enable us to develop game models that maximize the performance of Romanian football players on their teams. It also reflects the accomplishment of the set objectives with the aid of the most efficient research techniques.

Methodology

Methods

The methods used in exploratory research are represented by:

- The method of bibliographic study;
- The method of observation;

- The case study method;
- Video recording method;
- The method of comparative analysis.

Results

Playoffs in League 1 will be evenly distributed. With only four points at the beginning of the championship season, FCSB, the team selected for analysis in this study, will face an uphill battle. The gap between the top 6 teams shrunk as a result of the final round outcomes and the point halving.

The outcomes are displayed as follows in Figure 1:

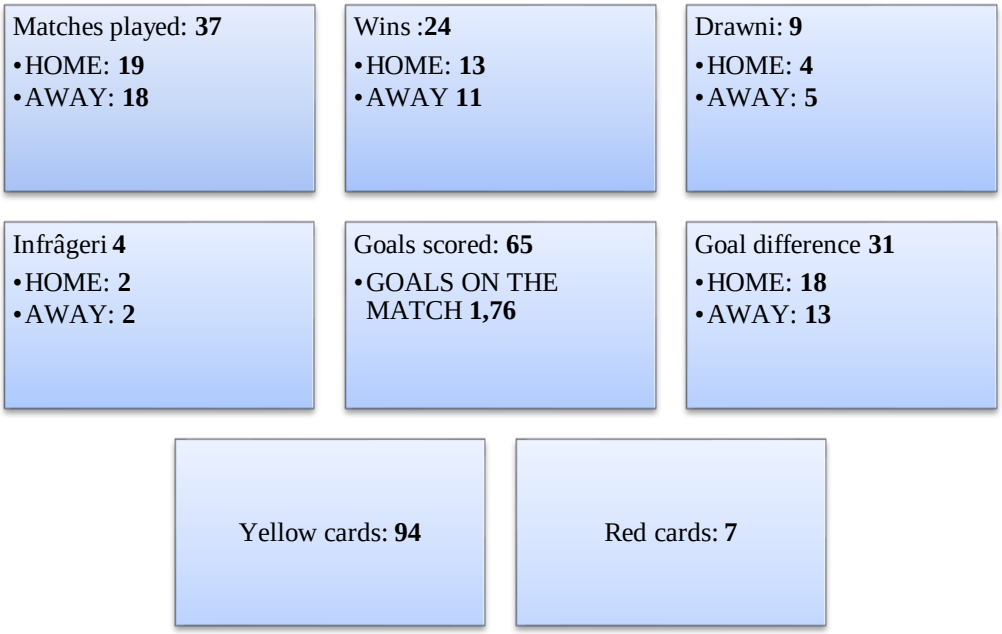

Figure 1. Results FCSB season 2023-2024

As a result, a team can lose three to four spots after every loss, and the bottom of the standings would result from two consecutive losses. The teams battling for survival in the first tier revealed their present forms at the end of the regular season.

The selection of these two teams was mostly based on tradition, the significance of winning the local championship, involvement in international competitions (Champions League, Europa League, etc.) with commendable results, and consistency in performance.

Table 1. *Data obtained by observing and analyzing the matches of the two teams*

26/07/23	UEC	**CSKA 1948 Sofia**	0-1	**FCSB**
03/08/23	UEC	**FCSB**	3 - 2	**CSKA 1948 Sofia**

First, let's focus on an analysis of eight technical-tactical performance indices, including possession ratio, weight of passes, scoring opportunities, actions taken, dangerous actions, goals scored, goals conceded, and the results obtained measured in the weight of wins, draws, and defeats. Based on these indices, as well as differences between the teams met, it can be concluded that the FK CSKA 1948 SOFIA team performed worse both during the match and in the first half.

We take note of the possession percentage, passes made, and scoring possibilities, all of which statistical analysis revealed to differ significantly during the games. Several other emphasized metrics included the quantity of risky behaviors, the ratio of goals scored to goals given up, and the quantity of actions, which took the worst spot. This indicator did not show a meaningful difference in any of the investigated half, although being better than the opponents' in terms of weight and percentage.

After analyzing the weight, percentage, and statistical interpretation of the samples for each half, it is possible to draw the conclusion that the FK CSKA 1948 SOFIA team outperformed its opponents in the first half, as evidenced by the differences that were highlighted between it and the second half, which included statistical confirmation. The indices of the weight of acts that did not statistically indicate the presence of a substantial difference are an exception.

We believe that this lower performance index should be viewed in relation to the percentage of risky plays and goal-scoring opportunities, which differ significantly at the first half and match levels. As a result, although if the share of actions differs less than other technical-tactical indices, it strangely indicates a higher level of player efficiency for the Bulgarian side.

However, we can also see that while there is a significant difference in the performance indicators, which are represented by the ratio of goals scored versus goals received and the number of dangerous actions, at the level of the first halves and over the course of the games, this difference is negligible at the level of the second halves.

This disparity results from the Bulgarian team's tactical strategy of taking the initiative in the first half, which is demonstrated by higher indices. This factor inherently influences the outcome, enabling the team to hand the ball to the opposition in the second half.

Discussion and Conclusions

Coaches and athletes can design a multi-year approach to establishing a competent athletic reserve for professional soccer by putting the proposed provisions to practical use.

Soccer teams are commercial entities with similar administrative responsibilities to other types of organizations.

The management of football clubs is in charge of fulfilling the demands of a variety of parties, including supporters, players, staff members, sponsors, suppliers, shareholders, broadcasters, sports media, local government agencies, football associations, and the law. Therefore, football clubs must be managed professionally.

The multifaceted nature of football has led to significant obstacles in the strategy of football club organization.

Modern concerns including corporate social responsibility and sustainability, financial restraint, corporate governance, and fair play should be considered while creating a performance management system. Football authorities are becoming increasingly concerned

about the amount of debt football teams are accruing despite their high revenue streams due to rising costs and obligations (Van Andel et al., 2017).

Even while the European Football Association (UEFA), local football associations, and federațiile stabilize regulations to safeguard football in this way, risk is predicted to have an impact on the future of the economy (Baranovič & Zemková, 2021). In order to address these issues, an effective program of player selection and awareness-raising should be made available to all players, player support staff, officials, and other pertinent parties (García-Pinillos et al., 2014).

In the dynamic world of professional football, player selection has undergone significant evolution throughout the years. There have been times when clubs relied solely on the intuition of researchers and their gut feelings to sign players. These days, data analysis has changed the player's experience, revolutionizing the way clubs make decisions about player recruitment.

The use of data by football clubs to make informed decisions about which players will help their teams succeed both domestically and abroad will be examined in the following sections.

Gathering a variety of information on possible recruits is the first stage in the player selection process. These days, clubs have a huge network of scouts and data analysts who work very hard to gather information on a player's performance both on and off the field. Goals, assists, passing accuracy, tackles, interceptions, and other statistics are included in this data. Clubs evaluate a player's work ethic, temperament, and ability to adjust to various playing styles in addition to their stats.

After the data is gathered, it goes through a thorough analysis procedure. This entails looking at player data over extended periods of time to spot patterns and trends. A club might, for instance, review a striker's scoring history against particular opponents or in various weather situations. Clubs can evaluate a player's consistency and adaptability with this level of detail.

Football teams use advanced research software to make data analysis easier. They can effectively visualize and interpret data thanks to these platforms. In order to help coaches design tactical methods that best utilize each player's strengths, clubs can, for instance, produce heat maps that display a player's favorite spots on the field.

Artificial intelligence has raised the bar for player selection significantly in recent years. Large data sets can be processed by AI algorithms, which can also spot hidden patterns that human analysts would miss.

Additionally, with amazing precision, this technology can forecast a player's future performance. To determine a player's potential, predictive analytics models make use of past player data. These models project a player's future worth to the team by considering a number of variables, including age, playing style, and injuries. These projections help clubs choose which players to sign and ensure that they are investing in the most promising athletes.

In addition, artificial intelligence is essential for preventing injuries. Clubs can spot indicators of exhaustion or possible injury concerns by examining player movement and physical data. This enables them to modify their training schedules and rest intervals to maintain players at their best, thereby decreasing the possibility of injuries that could ruin a season.

With the aid of AI-generated insights and extensive player data, clubs are now able to make data-driven hiring decisions.

The following demonstrates the steps involved in this process: Clubs first determine which parts of their team require reinforcement. This could be the result of tactical issues, injuries, or deficiencies in the team's general skill set. Clubs utilize their data to compile a shortlist of possible signings after needs are determined. These shortlists take into account a player's fit with the team's requirements in addition to reputation. After that, the clubs start talking to the players that have been chosen. Data is still important in these talks since it allows teams to defend their offers by pointing to a player's performance metrics and projected contributions.

Many observers now consider Ligue 1 to be among the liveliest and most unpredictable football leagues in Europe. The majority of people in the nation have at least a passing familiarity with the teams and players participating in League 1, reflecting the competition's continued enormous popularity at home.

Naturally, there are also a lot of ardent supporters. Others have emerged to replace the well-known historic clubs that have undergone significant changes in recent years—many of whom are no longer involved in League 1. With an emphasis on a strategy that promotes youth development, clubs like Viitorul, Universitatea Craiova, and Poli Iaşi have emerged as potential forces in Romanian football.

There is definitely a lot of potential for Ligue 1 to go even further, since many teams are requesting that managers monitor the progress of multiple young players in the league. In addition, the past several years have shown to be quite intriguing when it comes to foreign players breaking into League 1.

Prodigious athletes from nations like Portugal, Serbia, or Brazil have contributed their skills to Romanian football. One of the best football leagues to watch is Romanian League 1, which features a lot of intriguing players.

The success of FCSB is evidence of their dedication to data-driven player selection. It demonstrates how a team can use data analysis to its advantage and compete at the highest level even if it has fewer financial resources than some of Europe's biggest clubs. Football success in the modern day hinges on one's capacity to choose players with knowledge.

Clubs which use artificial intelligence and data analytics to their advantage have a major competitive advantage. We may anticipate that even more cutting-edge technologies will influence player recruitment in the future as the game develops.

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