

Operationalization of footballers' emotional intelligence in the dimensions of motivational orientation: analysis based on the basic positions

IHOR POPOVYCH¹, VIKTOR PLOKHIKH², ANTONINA HRYS³, MARIIA PAVLIUK⁴, PAVLO NOSOV⁵, SERHII ZINCHENKO⁶

¹Kherson State University, Kherson, UKRAINE

²V. N. Karazin Kharkiv National University, Kharkiv, UKRAINE

^{3,4}Kostiuk Institute of Psychology of the NAPS of Ukraine, Kyiv, UKRAINE

^{3,4}Interregional Academy of Personnel Management, Kyiv, UKRAINE

^{5,6}Kherson State Maritime Academy, Kherson, UKRAINE

Published online: March 31, 2023

(Accepted for publication March 15, 2023)

DOI:10.7752/jpes.2023.03095

Abstract:

The purpose is to conduct empirical research on the correlation of emotional intelligence with footballers' motivational orientation by functional realization (the basic position). The study identifies differences in the parameters of footballers' emotional intelligence by the basic position. The research involved 74 footballers representing such football clubs: FC "Krystal" (Kherson, Ukraine), FC "Chliba Khersonshchyny" (Kherson, Ukraine), FC "Enerhiia" (Nova Kakhovka, Ukraine), FC "Mykolaiv" (Mykolaiv, Ukraine). **Research methods:** valid and reliable psycho-diagnostic instruments – the method "EQ questionnaire" (Hall, 2000) and questionnaire "Athlete's Motivational Orientation" ("AMO") (Smoldovskaya, 2022); purposeful non-participant observation with standard protocols; statistical methods for identifying significant differences. **Results.** The study established empirically and substantiated that functional realization (the basic position) in footballers' competition activities correlates with motivational orientation and sufficiently developed emotional intelligence. The integral index of emotional intelligence (IIEQ) of strikers (Me=38.0) and midfielders (Me=38.0) is characterized by a high level and obvious motivational orientation towards a high result. The study shows that a high level of development of footballers' ability to manage their emotions and self-motivation corresponds to a high level of involvement in the activity performed and aspiration for team cohesion, for a synergetic contact with spectators. Four strongest ($p \leq .010$) significant correlations of self-motivation with subject-directed ($r_s = .289$), result-directed ($r_s = .344$) and personally-directed motivational orientation ($r_s = .244$) and empathy with socially-directed motivational orientation ($r_s = .267$) were established. **Conclusions.** The study substantiates that focusing on the development of footballers' emotional intelligence, in particular, of such parameters as self-motivation and empathy can give an essential advantage over competitors. It shows that the obtained scientific facts constitute a number of operational elements which should be taken into consideration by coaches in team sports.

Key words: self-motivation, empathy, footballers' orientation, emotional awareness, emotion recognition.

Introduction

Modern football has become something more than a team sports game admired by millions of people on the earth. Probably, it is difficult to find a person in the civilized world who has never heard about this game and has not watched it. Intensification and extensification of the processes occurring in modern football determine the search of fast, reliable and optimal decisions, consideration of anticipation processes in order to program and construct a desirable image of the future. Permanent changes occurring in organization of tournaments under the aegis of FIFA and UEFA, changes in the traditional time of holding the World Cup in football (Qatar, November – December 2022), innovations and amendments to the game laws, location of jurors on the line, application of Video Assistant Referee (VAR) et al. are evidences of fleetness and rush of football life. There is a number of studies examining and substantiating maximum realization of footballers' technical-tactical skills (Badari et al., 2020); consideration of players' physical conditions (Strykalenko et al., 2021), footballers' speed and strength training (Kozina et al., 2019), operationalization of tactical thinking by the basic position (Popovych et al., 2021e). At the same time, emotional symptoms generalized in the concept "emotional intelligence" are those individual-psychological phenomena which are of scientific interest and are expected to possess sufficient mental resource for operationalization.

The concept of emotional intelligence (EQ), whose author is P. Salovey and J. Mayer (1990), and also the studies of D. Goleman (1995) allow identifying two key aspects: intrapersonal and interpersonal. The intrapersonal aspect involves: self-esteem, awareness of one's own feelings, self-confidence, patience, self-control, responsibility, motivation for achievement, optimism and flexibility. The interpersonal aspect combines: empathy, tolerance,

communicativeness, openness, dialoguiness and anticipation (Goleman, 1995; Salovey & Mayer, 1990). A variety of combinations of the above parameters and substantiation of their appropriateness were reflected in the following models of emotional intelligence: the model of skills, the model of characteristics and the mixed model (Ostapyak et al., 2020). The outlined variants are important for selection of psycho-diagnostic instruments, namely, for choosing scales used for determining parameters of emotional intelligence. The research of personal zones of optimal functioning (ZOF) conducted by Yu. Hanin (2007) that is a specific prediction of successful and unsuccessful performances of athletes is interesting in the context of our research. There are studies proving the impact of physical activeness on the level of emotional intelligence. Teenagers who are engaged in organized motor activity have a higher adaptive potential and higher self-esteem (Laborde et al., 2014). Self-esteem is a complex personal phenomenon with a high assimilative ability and has a considerable impact on intellectual and self-regulation potential of an athlete (Popovych et al., 2022d; 2022g), has a positive effect on improving mental health (Popovych et al., 2022c). It was found that athletes' confidence before a competition and during it has a positive correlation with success of that competition (Birwatkar, 2014). We agree with the substantiated recommendations concerning objective evaluation of the role of EQ in sport. Researchers highlight that it is important to differentiate between cognitive and emotional components of emotional intelligence and psychological skills (Meyer, & Zizzi, 2007). These arguments allow generalizing that creation of a profile of emotional intelligence which is a specific artificial model, which is a prototype of the phenomenon under study is very important at the stage of empirical research. It is also necessary to remember that in individual EQ profiles of athletes with which they participate in competitions, there are weaknesses along with strengths.

The researchers S. Sukys et al. (2019) established significant correlations between the general level of EQ and internal, integrated, identified and introjected regulation. Scientists state that managing emotions as a component of a high level of EQ has a negative correlation with demotivation (Sukys et al., 2019). Examination of the correlation between anxiety, EQ and motivational climate of young footballers shows that the respondents who were oriented towards tasks had a higher level of EQ and a lower level of anxiety. Researchers generalized that it is important to develop internal motivation and footballers' ability to regulate their emotions (Castro-Sánchez et al., 2019). The impact of EQ on psycho-biosocial states is interesting in terms of a role repertoire of footballers (Nateri et al., 2020). Structural equation modelling (SEM) enabled scientists to measure the impact of an anticipation component, showing that characteristics of EQ allow positive prediction of functional states and negative prediction of dis-functional psycho-biosocial states. Efficient communication inside a team determined the correlation between emotional intelligence and functional states, whereas ambiguity of the roles mediated the correlation between emotional intelligence and dysfunctional states. The results proved that EQ is a precondition of psycho-biosocial states of players in team sports (Nateri et al., 2020). Systemic empirical research on mental states in sporting activities (Popovych et al., 2019b; 2021c; 2022a; 2022e), educational-professional (Popovych et al., 2019a), tourism (Popovych et al., 2019c) and other areas of current professional activities (Nosov et al., 2020; Popovych et al., 2021b; Solovey et al., 2020) showed that the level of measurements corresponding to the parameters of emotional intelligence has a considerable impact on a dominating mental state. There are studies on emotional-volitional potential (Cheban et al., 2020a), mental resources (Cheban et al., 2020b), an emotional factor (Cheban et al., 2020c) of competition self-mobilization of athletes-paddlers which selected relevant models of cognitive and emotional measurements reflecting EQ of the respondents.

We consider operationalization of footballers' emotional intelligence in the dimensions of motivational orientation, taking into account their basic positions, to be identification of significant differences in the respondents' parameters under study. Significant differences will allow establishing scientific facts constituting the list of operational elements which are valuable for the development of EQ giving an advantage over competitors.

Hypothesis. We assume that the parameters of footballers' emotional intelligence differ significantly by the basic position; footballers' emotional intelligence correlates with motivational orientation.

Purpose. To conduct empirical research on the correlation of emotional intelligence with footballers' motivational orientation by the functional realization (the basic position).

Material and methods

Methodology. Methodological foundation of the research on footballers' emotional intelligence in the dimensions of motivational orientation is basic concepts of emotional intelligence by P. Salovey and J. Mayer (1990), D. Goleman (1995), J. Mayer and G. Geher (1996) et al.; concepts about the role of emotional intelligence in terms of the main professional activity (Halian et al., 2020; Popovych et al., 2022b; Vavryniv & Yaremko, 2022); studies on psycho-emotional state of readiness (Plokhikh, 2021; Plokhikh & Yanovska, 2022) and mental resources of an individual (Popovych et al., 2022f). We chose a verifying research strategy with analytical-statistical distribution of empirical material and application of reliability coefficients. We analyzed a number of modern studies which are directly or indirectly related to selection of the parameters which relevantly reflect the research subject, creation of an empirical picture and substantiation of the research results in the following areas: 1) specificity of taking into consideration psycho-physiological regularities (Cretu et al., 2021; Galan et

al., 2018; Lazareva et al., 2017; Paliichuk et al., 2018); 2) respondents' age-related psychological regularities (Popovych et al., 2021a; 2021d); 3) regularities of organization of high-quality educational-training space (Blynova et al., 2022; Hudimova, 2021; Hudimova et al., 2021; Kobets et al., 2021a; 2021b); 4) research on axiopsychological resource of personality (Halian, 2022; Huiias, 2020; Huiias & Hoian, 2022); 4) safety and a psycho-emotional resource (Mamenko et al., 2022; Nosov et al., 2021a; 2021b; Zinchenko et al., 2021; 2022a; 2022b).

Participants. The research involved 74 footballers representing such football clubs: FC "Krystal" (Kherson, Ukraine), FC "Khliba Khersonshchyny" (Kherson, Ukraine), FC "Enerhiia" (Nova Kakhovka, Ukraine), FC "Mykolaiv" (Mykolaiv, Ukraine). The age of footballers was ($M=22.93\pm 3.42$).

Procedures and Instruments. The psycho-diagnostic instrument by N. Hall was selected as the fundamental one. "EQ questionnaire" (EQQ) (Hall, 2000) contains thirty statements with the range of responses by Stapel's six-point scale from 1 (absolutely disagree) to six 6 points (absolutely agree). The questionnaire combined five basic scales and one integral scale. The basic scales reflected appropriately cognitive and emotional components of EQ: emotional awareness (EA), managing emotions (ME), self-motivation (SM), empathy (E) and recognition of other participants' emotions (ROPE).

The integral index of emotional intelligence (IEQ) reflected the total value of manifestation by the basic scales. Athletes' emotional awareness is not only realization and understanding of their own emotional states, moods, but also enriching a personal vocabulary of emotions. Respondents with high indexes understand their internal states and understand themselves better, and, as a result, realize self-regulation potential more efficiently.

Managing emotions for athletes is their ability to demonstrate emotional flexibility and voluntarily manage their emotional states. Self-regulation of athletes is generally considered to be control of their behavior through emotional control. Self-motivation also implies volitional regulation of states and actions through strengthening or weakening motives with a distinctive emotional foundation. An empathic component is compassion and sympathy to the current emotional state of other participants of sporting activities and readiness to support. Recognition of emotions of other participants is ability to affect medium level).

According to the verifying research strategy, much attention was paid to the search of a psycho-diagnostic instrument capable of differentiating motivational orientation by the basic dynamic and content characteristics of athletes in team sports, identifying social-psychological needs, allowing determination of the level of athlete's dominating motifs.

The modern psychometric method – the questionnaire "Athlete's Motivational Orientation" ("AMO") (Smoldovskaya, 2022) – was used for that. The questionnaire combines thirty-six statements differentiated by four scales (Stapel scale). The three-point scale ranges from "partially agree" (0 point) to "absolutely agree" (2 points). The scales of motivational orientation: subject-directed (SDMO); result-directed (RDMO); socially-directed (MOSD) and personally-directed (PDMO). Cronbach's α homogeneity coefficient of the responses in the sample equaled $\alpha_{AMO}=0.912$ (a high level).

Organization of Research. The survey and purposeful non-participant observations were approved by the administrations of football clubs and head coaches. The verifying cross-section was done during the matches of championships of regional and national competitions in football (August – November, 2021). The footballers' data by the basic position were taken into consideration while collecting data and filling out observation protocols. The data of the respondents with no obvious basic position were removed from further processing. Clear differentiation of a role component was important since the hypotheses were formulated according to this criterion. Such an approach allowed meeting the main requirements for empirical research, ensured validity and reliability of the obtained results. The participants were informed in advance and took part in the research voluntarily.

Statistical Analysis. The data were processed by means of the computer programs "IBM SPSS Statistics" version 29.0.0.0 (241) and "MS Excel". "MS Word" was used for graphical visualization. Reliability was established using the following coefficients: Cronbach's, Mann-Whitney U-test, Spearman's (r_s) at the level $p\leq 0.050$ and $p\leq 0.010$. H-test of Kruskal-Wallis was used to identify general differences by the corresponding parameters between the subgroups of footballers under research, differentiated by functional realizations (the basic position).

Results

Tabl. 1 contains empirical results of the research by the key method "EQ questionnaire" (EQQ) (Hall, 2000). The data are presented by the main descriptive frequency characteristics: median (Me), minimal value (min), maximum value (max) by all the scales with differentiation of subgroups by the basic positions ($n=74$). Differences by non-parametric data of the research scales were established by H-test of Kruskal-Wallis.

Table 1. Comparison of the indexes of emotional intelligence of the research participants by H-test of Kruskal-Wallis by the basic positions (n = 74)

| Basic positions | Statistical parameter | Scales of "EQ questionnaire" (Hall, 2000) | | | | | |
|--------------------------|-----------------------|---|---------------|---------------|--------------|---------------|---------------|
| | | EA | ME | SM | E | ROPE | IIEQ |
| Goalkeepers | <i>Me</i> | 7.00 | 6.00 | 7.00 | 6.00 | 6.00 | 35.00 |
| | min | 5.00 | 4.00 | 5.00 | 4.00 | 4.00 | 31.00 |
| | max | 9.00 | 8.00 | 9.00 | 8.00 | 8.00 | 39.00 |
| Defenders | <i>Me</i> | 8.00 | 6.00 | 7.00 | 5.00 | 8.00 | 37.00 |
| | min | 6.00 | 4.00 | 5.00 | 3.00 | 6.00 | 33.00 |
| | max | 10.00 | 8.00 | 9.00 | 7.00 | 10.00 | 41.00 |
| Midfielders | <i>Me</i> | 9.00 | 7.00 | 9.00 | 6.00 | 6.00 | 38.00 |
| | min | 7.00 | 5.00 | 7.00 | 4.00 | 4.00 | 36.00 |
| | max | 11.00 | 9.00 | 11.00 | 8.00 | 9.00 | 40.00 |
| Strikers | <i>Me</i> | 7.00 | 7.00 | 9.00 | 6.50 | 6.00 | 38.00 |
| | min | 5.00 | 5.00 | 7.00 | 4.00 | 4.00 | 36.00 |
| | max | 10.00 | 10.00 | 11.00 | 8.00 | 8.00 | 41.00 |
| H-test of Kruskal-Wallis | H | 18.063 | 10.709 | 26.973 | 9.675 | 20.262 | 11.831 |
| | p | <.001 | .013 | <.001 | .022 | <.001 | .008 |

Note: Me – median (in italics); min – minimum value; max – maximum value; EA – emotional awareness; ME – managing emotions; SM – self-motivation; E – empathy; REOP – recognition of emotions of other participants; IIEQ – integral index of emotional intelligence.

The given empirical data by the basic positions have relatively even distribution and there are no significant differences between them and the data obtained in other studies on sport (Popovych et al., 2022b) and research on healthcare (Halian et al., 2020).

All probable empirical pairs were created for thorough statistical processing of the empirical research data. These are six pairs: S&M, S&D, S&G, M&D, M&G, D&G. Significant differences were established by Mann-Whitney U-test. Tabl. 2 presents results of comparison of the empirical pairs by the scales of the method "EQ questionnaire" (EQQ) (Hall, 2000).

Table 2. Results of comparison of the empirical pairs by the scales of the method "EQ questionnaire" (EQQ) (Hall, 2000)

| Basic positions | Statistical parameter | Mann-Whitney U-test | | | | | |
|-----------------|-----------------------|---------------------|--------------|---------------|---------------|--------------|---------------|
| | | EA | ME | SM | E | REOP | IIEQ |
| S&M | U | 10.500 | 6.500 | 8.000 | 6.000 | 10.000 | 7.000 |
| | p | .087 | .016 | .048 | .012 | .084 | .017 |
| S&D | U | 7.500 | 8.500 | 10.000 | 10.000 | 10.000 | 10.500 |
| | p | .040 | .044 | .101 | .038 | .096 | .042 |
| S&G | U | 11.500 | 7.500 | 16.500 | 7.500 | 8.500 | 12.500 |
| | p | .102 | .022 | .123 | .022 | .030 | .046 |
| M&D | U | 6.500 | 7.000 | 6.500 | 7.500 | 9.000 | 8.000 |
| | p | .014 | .018 | .014 | .032 | .052 | .044 |
| M&G | U | 13.500 | 9.500 | 10.000 | 9.500 | 10.000 | 11.500 |
| | p | .112 | .064 | .040 | .058 | .086 | .043 |
| D&G | U | 7.500 | 5.500 | 7.000 | 7.500 | 10.000 | 7.500 |
| | p | .034 | .014 | .030 | .018 | .088 | .020 |

Note: EA – emotional awareness; MPE – managing emotions; SM – self-motivation; E – empathy; REOP – recognition of emotions of other participants; IIEQ – integral index of emotional intelligence; G – goalkeepers; D – defenders; S – strikers; M – midfielders; Mann-Whitney U-test; p – level of significance (p ≤ .050 – level of significance given in bold type).

The first hypothesis was empirically confirmed – the parameters of emotional intelligence of the footballers by the basic positions have a number of significant differences. Tabl. 3 presents empirical results by the method "Athlete's Motivational Orientation" (Smoldovskaya, 2022).

The data are presented by the main descriptive frequency characteristics: median (Me), minimum value (min), maximum value (max) by all the scales with differentiation by the basic positions (n = 74). General differences between the subgroups of research participants were established by means of H-test of Kruskal-Wallis according to the indexes of motivational orientation of the research participants.

Table 3. Comparison of the indexes of motivational orientation of the research participants by H-test of Kruskal-Wallis by main game roles (n=74)

| Basic positions | Statistical parameter | Scales of "Athlete's Motivational Orientation" (Smoldovskaya, 2022) | | | |
|--------------------------|-----------------------|---|-------|-------------|-------------|
| | | SDMO | RDMO | MOSD | PDMO |
| Goalkeepers | <i>Me</i> | 7.00 | 6.00 | 9.00 | 7.00 |
| | min | 5.00 | 4.00 | 7.00 | 4.00 |
| | max | 9.00 | 8.00 | 11.00 | 8.00 |
| Defenders | <i>Me</i> | 8.00 | 6.00 | 8.00 | 6.00 |
| | min | 6.00 | 4.00 | 6.00 | 4.00 |
| | max | 10.00 | 8.00 | 10.00 | 8.00 |
| Midfielders | <i>Me</i> | 8.00 | 7.00 | 8.00 | 6.00 |
| | min | 6.00 | 5.00 | 6.00 | 4.00 |
| | max | 10.00 | 9.00 | 10.00 | 8.00 |
| Strikers | <i>Me</i> | 8.00 | 7.00 | 9.00 | 6.00 |
| | min | 6.00 | 5.00 | 7.00 | 4.00 |
| | max | 10.00 | 10.00 | 11.00 | 8.00 |
| H-test of Kruskal-Wallis | H | .304 | .022 | .083 | .966 |
| | p | .050 | .050 | .050 | .050 |

Note: Me – median (in italics); min – мінімальне значення; max – maximum value; SDMO – subject-directed motivational orientation; RDMO – result-directed motivational orientation; MOSD – socially-directed motivational orientation; PDMO – personally-directed motivational orientation; $p \leq .050$ – level of significance given in bold type.

Since there were significant differences between the subgroups of the research participants with different football functional realization by the parameter RDMO and differences on the level of tendencies between the above subgroups by the parameter MOSD, paired comparison of the subgroups was performed by these parameters. Significant differences in RDMO were established in the following pairs of the subgroups: strikers have an advantage over defenders ($U=66.00$; $p=.016$); midfielders have an advantage over defenders ($U=215.00$; $p=.022$); strikers have an advantage over goalkeepers on the level of tendency ($U=23.00$; $p=.067$). Paired comparison of the subgroups showed the following facts concerning MOSD: considerable advantage of strikers over midfielders ($U=140.00$; $p=.048$); advantage of strikers over defenders on the level of tendency ($U=81.00$; $p=.064$); advantage of goalkeepers over midfielders on the level of tendency ($U=71.50$; $p=.091$).

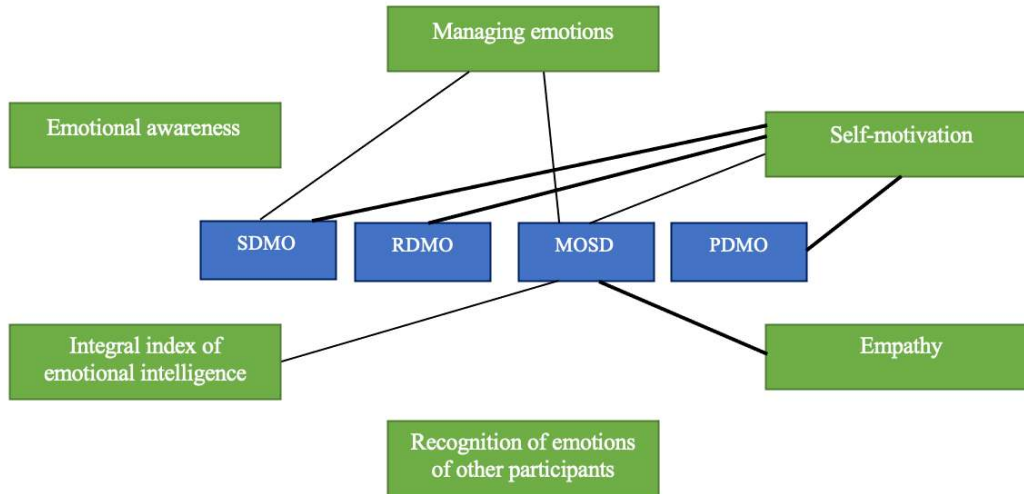
Correlations between the parameters of emotional intelligence (EQQ) (Hall, 2000) and the parameters of motivational orientation "AMO" (Smoldovskaya, 2022) were established by means of Spearman's correlation coefficient (r_s) (Tabl. 4).

Table 4. Correlations between the basic and integral scales of EQ with the scales of footballers' motivational orientation (n=74)

| Scales of the parameters of emotional intelligence | Statistical parameter | Scales of motivational orientation | | | |
|--|-----------------------|------------------------------------|---------------|---------------|---------------|
| | | SDMO | RDMO | MOSD | PDMO |
| EA | r_s | .072 | .046 | .085 | .056 |
| | p | .812 | .856 | .782 | .842 |
| ME | r_s | .112* | .096 | .119* | .087 |
| | p | .042 | .382 | .043 | .762 |
| SM | r_s | .248** | .348** | .167* | .354** |
| | p | .009 | .008 | .022 | .008 |
| E | r_s | .037 | -.042 | .232** | -.029 |
| | p | .895 | .711 | .009 | .671 |
| REOP | r_s | .017 | -.023 | .083 | -.025 |
| | p | .911 | .623 | .775 | .647 |
| IIEQ | r_s | .068 | .055 | .112* | .082 |
| | p | .831 | .845 | .042 | .762 |

Note: EA – emotional awareness; ME – managing emotions; SM – self-motivation; E – empathy; REOP – recognition of emotions of other participants; IIEQ – integral index of emotional intelligence; SDMO – subject-directed motivational orientation; RDMO – result-oriented motivational orientation; MOSD – socially-directed motivational orientation; PDMO – personally-directed motivational orientation; p – level of significance given in bold type; * – $p \leq .050$; ** – $p \leq .010$.

Correlation pleiade was created to perform thorough analysis of the obtained correlations (Fig. 1).



Note: ——— positive correlations with $p \leq .050$; ——— positive correlations with $p \leq .010$; SDMO – subject-directed motivational orientation; RDMO – result-directed motivational orientation; MOSD – socially-directed motivational orientation; PDMO – personally-directed motivational orientation;

Figure I. Correlation pleiade of correlations between the parameters of emotional intelligence and the dimensions of footballers' motivational orientation (n=74)

The research shows that there are four strongest ($p \leq .010$) significant correlations of self-motivation with subject-directed ($r_s = .289$), result-directed ($r_s = .344$) and personally-directed motivational orientation ($r_s = .244$) and empathy with socially-oriented motivational orientation ($r_s = .267$). The second hypothesis was empirically confirmed – footballers' emotional intelligence correlates with motivational orientation.

Discussion

In scientific literature on sport there are many studies focusing on the parameters of emotional intelligence and athletes' motivational sphere (Castro-Sánchez et al., 2019; Cheban et al., 2020a; Ostapyak et al., 2020). We think that a three-dimensional combination of the parameters of emotional intelligence with footballers' motivational orientation by their functional realization (the basic position) met our scientific expectations.

The study substantiates that emotional awareness (EA), as a cognitive component of EQ in strikers (see Tabl. 1 and Tabl. 2) has significant differences in the parameter due to the system of training-educational preparation and permanent functional load of this basic position. To achieve results strikers must have an advantage in speed and technical data over their vis-a-vis – a defensive element (a goalkeeper – defenders), which can number up to 5 – 6 players. When reading football websites of favorite teams, or listening to football commentators, we can obtain information that football scouts look for a ram, a forward able to make a difference in the functional zone due to technical mastery. An essential advantage in the parameters of EQ of strikers and midfielders (see Tabl. 1 and Tabl. 2) results from doing more physical (running) and tactical work in comparison with a defensive element (a goalkeeper and defenders). Our research confirms the statement that footballers' functional competencies in difficult extreme situations are a basis for resilience, stress-resistance and a precondition for gaining a victory (Popovych et al., 2022f). Football scouts should pay attention to a cognitive component of footballers' emotional intelligence, and coaches specializing in physical and tactical training should create conditions for successful self-realization of such players. Obviously, the ability to control oneself in difficult game situations, during derbies, principal cup meetings or tournaments is equally important for all team players. Representatives of team sports know that teams win in competitions, and “a difference” on the playground is made by personalities who outplay their vis-a-vis in their own game zone.

Self-motivation as an operational component of emotional intelligence provides optimal readiness (Popovych et al., 2022g) and functioning of respondents' dominating mental states that is confirmed in another study by I. Popovych et al. (2021c). Athletes' functional competencies reflecting knowledge, skills and ways of action in preparing themselves for optimal active state (competitive condition), as A. Alekseev (2006) highlights, require a high level of self-regulation readiness. Athletes with high indexes of self-motivation are able to move permanently from one task to another, changing and complicating it. We registered in observation protocols that there were players who stayed on the playing ground after training or moved to another training field and trained penalty and corner kicks, trained some tactical-technical actions and improved their prepared variations to automatism. The percentage of these players is not considerable ($n \leq 15$; 20.27%). Such footballers are directed by internal potential – self-motivation which regulates harmony/disharmony of psycho-emotional states. Such

athletes are able to generate advantage in their functional zone on the playing ground, ensure successful realization of a main intention of tactical preparation for a game. At the same time, training staff should take into consideration individual-typological features of each team player of first eleven and reserve players by their basic position for successful realization of a main attention of tactical preparation for a game. Sometimes players have no basic position, their value consists in being universal and ability to play in several positions. Usually it can be two positions per season on a professional level and it can be more positions on an amateur level. Coaches believe that some players are thinkers, and others are practitioners. Certainly, it is a relative division but each type involves, respectively: destroyers, organizers, playmakers, laterals and wingers. Therefore, a coach's role is a key one in determining the basic position, taking into consideration emotional potential and other personal characteristics and career advantages. A chance to play successfully in "their own role" increases with an appropriately determined basic position and functional realization.

We should pay attention to a very interesting sports scientific fact. High indexes of PDMO in goalkeepers (Me=7.00; min=4.00; max=8.00) can have a negative impact on functional and professional development of athletes with this basic position. Excessive personal orientation can cause slow professional development because of active interaction of defense mechanisms. It is confirmed in the research by V. Plokhikh (2022). It was established that excessive concentration on "Self" reduces social-communicative activeness and slows down intellectual development. This scientific fact requires attention of training staff to such players, consideration and examination over the course of a long sports period. The advantage of forward and midfield footballers in the ability to manage their own emotions (see Tabl. 1) and availability of dominating levels of self-motivation unlike a defensive element (a goalkeeper and defenders) (see Tabl. 3) were expected. The study shows that self-motivation manifests itself as a key component of emotional intelligence of the footballers participating in the research. At the same time, self-motivation is a component of the structure of the processes of self-regulation (Goleman, 1995). A high level of development of the ability to manage emotions and self-motivation facilitate a synergetic contact with spectators. Additionally, footballers' self-motivation correlates directly with orientation towards a high result and aspiration for success in sport ($p \leq 0.10$).

Operational elements found in our empirical research are of scientific theoretical and applied value for coaches in team sports.

Conclusions

1. It was established empirically and substantiated that functional realization (the basic position) correlates with motivational orientation and sufficiently developed emotional intelligence in footballers' competition activity. The integral index of emotional intelligence (IEEQ) of strikers (Me=38.0) and midfielders (Me=38.0) is characterized by a high level and distinctive motivational orientation towards a high result.

2. We identified an advantage in the parameters of EQ of strikers and midfielders, which results from doing more physical (running) and tactical work in comparison with a defensive element (a goalkeeper and defenders).

3. We established four strongest ($p \leq 0.10$) significant correlations of self-motivation with subject-directed ($r_s = .289$), result-directed ($r_s = .344$) and personally-directed motivational orientation ($r_s = .244$), empathy with socially-directed motivational orientation ($r_s = .267$). We substantiated that development of emotional intelligence, in particular, such its parameters as self-motivation and empathy, that have the most considerable impact on the components of motivational orientation, can generate an essential advantage of footballers over their rivals.

4. Efficient functional realization of forward and midfield footballers corresponds to a comparatively high level of development of their ability to manage their emotions and self-motivation as components of emotional intelligence making the structure of the processes of personal self-regulation. The development of these parameters in footballers corresponds to a high level of involvement in the activity performed and aspiration for team cohesion and synergetic contact with their spectators. Footballers' self-motivation also has a direct correlation with orientation towards a high result and aspiration for success in sport ($p \leq 0.10$).

5. The level of emotional intelligence and high development of some components of its structure (self-motivation, managing emotions and empathy) for footballers on the whole and, especially for forwards, correspond to a high level of socially-directed motivational orientation.

References:

- Alekseev, A. V. (2006). *Get over yourself! Mental preparation in sports*. Rostov on Don: Phoenix.
- Badari, T. P., Machado, G., Moniz, F., Fontes, A., & Teoldo, I. (2020). Comparison of soccer players' tactical behaviour in small-sided games according to match status. *Journal of Physical Education and Sport*, 21(1), 12-20. <https://doi.org/10.7752/jpes.2021.01002>
- Birwatkar, V. P. (2014). Emotional intelligence: The invisible phenomenon in sports. *Eur. J. Sports Exerc. Sci.*, 3(19), 31-31.
- Blynova, O., Popovych, I., Hulias, I., Radul, S., Borozentseva, T., Strilets-Babenko, O., & Minenko, O. (2022). Psychological safety of the educational space in the structure of motivational orientation of female athletes:

- a comparative analysis. *Journal of Physical Education and Sport*, 22(11), 2723-2732. <https://doi.org/10.7752/jpes.2022.11346>
- Castro-Sánchez, M., Zurita-Ortega, F., Ubago-Jiménez, J. L., González-Valero, G., & Chacón-Cuberos, R. (2019). Relationships between Anxiety, Emotional Intelligence, and Motivational Climate among Adolescent Football Players. *Sports*, 7(2), 34. <https://doi.org/10.3390/sports7020034>
- Cheban, Yu., Chebykin, O., Plokhikh, V., & Massanov, A. (2020a). Emotional and volitional potential of self-mobilization in the organization of time perspective activity of highly qualified rowing athletes. *Journal of Physical Education and Sport*, 20(SI 6), 3128-3137. <https://doi.org/10.7752/jpes.2020.s6424>
- Cheban, Yu., Chebykin, O., Plokhikh, V. & Massanov, A. (2020b). Mental resources for the self-mobilization of rowing athletes. *Journal of Physical Education and Sport*, 20(3), 1580-1589. <https://doi.org/10.7752/jpes.2020.03216>
- Cheban, Yu. V., Chebykin, O. Ya., Plokhikh, V. V., & Massanov, A. V. (2020c). Emotional factor of competitive self-mobilization of professional rowers. *Insight: the psychological dimensions of society*, 3, 28-43. <https://doi.org/10.32999/2663-970X/2020-3-2>
- Cretu, M., Borysenko, I., Ushmarova, V., Grynyova, V., & Masyh, V. (2021). Features of vascular regulation of students – future specialists in physical education and sports of different sports specializations with different body lengths. *Health, Sport, Rehabilitation*, 7(2), 29-44. <https://doi.org/10.34142/HSR.2020.07.02.03>
- Galan, Y., Andrii, K., Yuriy, M., Paliichuk, Y., Moroz, O., Tsybanyuk, O., Yarmak, O. (2018). Characteristics of physical conditions of 7-9-year-old schoolchildren within the process of physical education. *Journal of Physical Education and Sport*, 18, 1999-2007. <https://doi.org/10.7752/jpes.2018.s5297>
- Goleman, D. (1995). Emotional intelligence. New York: Bantam Books.
- Halian, A., Halian, I., Burlakova, I., Shevchenko, R., Lappo, V., Zhigarenko, I. & Popovych, I. (2020). Emotional Intelligence in the Structure of Adaptation Process of Future Healthcare Professionals. *Revista Inclusiones*, 7(3), 447-460.
- Halian, I. M. (2022). Value contradictions in personal axiogenesis. *Insight: the psychological dimensions of society*, 7, 11-23. <https://doi.org/10.32999/2663-970X/2022-7-2>
- Hall, N. (2000). EQ questionnaire. New York: Bantam Books.
- Hanin, Yu. L. (2007). Emotions in sport: Current issues and perspectives. In: Tenenbaum G., Eklund R., editors. Handbook of Sport Psychology. Wiley & Sons; New York, NY, USA, 3, 22-41.
- Hudimova, A. Kh. (2021). Psychological well-being and social media users' behavioral online patterns in everyday life and during COVID-19 pandemic. *Insight: the psychological dimensions of society*, 5, 133-147. <https://doi.org/10.32999/2663-970X/2021-5-9>
- Hudimova, A., Popovych, I., Savchuk, O., Liashko, V., Pyslar, A., & Hrys, A. (2021). Research on the relationship between excessive use of social media and young athletes' physical activity. *Journal of Physical Education and Sport*, 21(6), 3364-3373. <https://doi.org/10.7752/jpes.2021.06456>
- Hulias, I. (2020). Axiopsychological projection of life achievements of the personality. Kyiv: PH Lyudmila.
- Hulias, I. A., & Hoian, I. M. (2022). Explication of factors of the axiopsychological design of life achievements of modern youth. *Insight: the psychological dimensions of society*, 7, 41-57. <https://doi.org/10.32999/2663-970X/2022-7-4>
- Kobets, V., Liubchenko, V., Popovych, I., & Koval, S. (2021a). Institutional Aspects of Integrated Quality Assurance of Engineering Study Programs at HEI Using ICT. In: Ivanov V., Trojanowska J., Pavlenko I., Zajac J., Peraković D. (eds). Advances in Design, Simulation and Manufacturing IV. DSMIE 2021. *Lecture Notes in Mechanical Engineering*. Springer, Cham. https://doi.org/10.1007/978-3-030-77719-7_30
- Kobets, V., Liubchenko, V., Popovych, I., & Koval, S. (2021b). Institutional Aspects of Integrated Quality Assurance of Study Programs at HEI Using ICT. *CEUR Workshop Proceedings*, 2833, 83-92.
- Kozina, Z., Cretu, M., Safronov, D., Gryn, I., Shkrebtii, Yu., Shepelenko, T., & Tanko, A. (2019). Dynamics of psychophysiological functions and indicators of physical and technical readiness in young football players aged 12-13 and 15-16 years during a 3-month training process. *Physiotherapy Quarterly*, 27(3), 20-27. <https://doi.org/10.5114/pq.2019.86464>
- Laborde, S., Lautenbach, F., Allen, M. S., Herbert, C., & Achtzehn, S. (2014). The role of trait emotional intelligence in emotion regulation and performance under pressure. *Pers. Individ. Differ.*, 57, 43-47.
- Lazareva, O., Aravitska, M., Andrievieva, O., Galan, Y., Dotsyuk, L. (2017). Dynamics of physical activity status in patients with grade I-III obesity in response to a physical rehabilitation program. *Journal of Physical Education and Sport*, 17(3), 1960-1965. <https://doi.org/10.7752/jpes.2017.03193>
- Mamenko, P., Zinchenko, S., Kobets, V., Nosov, P., & Popovych I. (2022). Solution of the Problem of Optimizing Route with Using the Risk Criterion. In: Babichev, S., Lytvynenko, V. (eds). Lecture Notes in Computational Intelligence and Decision Making. ISDMCI 2021. *Lecture Notes on Data Engineering and Communications Technologies*, 77. Springer, Cham. https://doi.org/10.1007/978-3-030-82014-5_17

- Meyer, B. B., & Zizzi, S. (2007). Emotional intelligence in sport: Conceptual, methodological, and applied issues. In *Mood and Human Performance: Conceptual, Measurement, and Applied Issues*; Lane, A.M., Ed.; Nova Science Publishers, Inc. New York, NY, USA.
- Mayer, J. D., & Geher, G. (1996). Emotional intelligence and the identification of emotion. *Intelligence*, 22(2), 89-113. [https://doi.org/10.1016/S0160-2896\(96\)90011-2](https://doi.org/10.1016/S0160-2896(96)90011-2)
- Nateri, R., Robazza, C., Tolvanen, A., Bortoli, L., Hatzigeorgiadis, A., & Ruiz, M. C. (2020). Emotional Intelligence and Psychobiosocial States: Mediating Effects of Intra-Team Communication and Role Ambiguity. *Sustainability*, 12, 9019. <https://doi.org/10.3390/su12219019>
- Nosov, P., Zinchenko, S., Ben, A., et al. (2021a). Navigation safety control system development through navigator action prediction by Data mining means. *Eastern-European Journal of Enterprise Technologies*, 2(9(110)), 55-68. <https://doi.org/10.15587/1729-4061.2021.229237>
- Nosov, P., Zinchenko, S., Popovych, I., Safonov, M., Palamarchuk, I., & Blakh, V. (2020). Decision support during the vessel control at the time of negative manifestation of human factor. *CEUR Workshop Proceedings*, 2608, 12-26.
- Nosov, P., Zinchenko, S., Plokhikh, V., Popovych, I., Prokopchuk, Y., Makarchuk, D., Mamenko, P., Moiseienko, V., & Ben, A. (2021b). Development and experimental study of analyzer to enhance maritime safety. *Eastern-European Journal of Enterprise Technologies*, 4(3(112)), 27-35. <https://doi.org/10.15587/1729-4061.2021.239093>
- Ostapyak, Z. M., Mytskan, B. M., Myskan, T. S, Vypasnyak, I. P., Lesiv, M. Z. (2020). Emotional intelligence and sports. *Bulletin of the Precarpathian University. Series: Physical culture*, 3(35), 64-78
- Palichuk, Y., Dotsyuk, L., Kyselytsia, O., Moseychuk, Y., Martyniv, O., Yarmak, O., Galan, Y. (2018). The influence of means of orienteering on the psychophysiological state of girls aged 15-16-years. *Journal of Human Sport and Exercise*, 13(2), 443-454. <https://doi.org/10.14198/jhse.2018.132.16>
- Plokhikh, V. V. (2022). Limitation of psychological defenses on the formation of students' time perspective. *Insight: the psychological dimensions of society*, 8, 39-55. <https://doi.org/10.32999/2663-970X/2022-8-4>
- Plokhikh, V. V. (2021). Assessment of subject's readiness for urgent actions using the variations of sensorimotor response tasks. *Insight: the psychological dimensions of society*, 5, 46-65. <http://doi.org/10.32999/2663-970X/2021-5-4>
- Plokhikh, V. V., & Yanovska, S. G. (2022). Sex differentiation in the organization of emergency sensorimotor action. *Insight: the psychological dimensions of society*, 7, 24-39. <https://doi.org/10.32999/2663-970X/2022-7-3>
- Popovych, I., Blynova, O., Aleksieieva, M., Nosov, P., Zavatska, N., & Smyrnova, O. (2019a). Research of Relationship between the Social Expectations and Professional Training of Lyceum Students studying in the Field of Shipbuilding. *Revista ESPACIOS*, 40(33), 21.
- Popovych, I., Blynova, O., Bokshan, H., Nosov, P., Kovalchuk, Z., Piletska, L., & Berbentsev, V. (2019b). The Research of the Mental States of Expecting a Victory in Men Mini-football Teams. *Journal of Physical Education and Sport*, 19(4), 2343-2351. <https://doi.org/10.7752/jpes.2019.04355>
- Popovych, I., Blynova, O., Nass Álvarez, J. L., Nosov, P., & Zinchenko, S. (2021a). A historical dimension of the research on social expectations of an individual [DIMENSIÓN HISTÓRICA DEL ESTUDIO DE LAS EXPECTATIVAS SOCIALES DE LA PERSONA]. *Revista Notas Históricas y Geográficas*, 27, 190-217.
- Popovych, I., Borysiuk, A., Semenov, O., Semenova, N., Serbin, I., & Reznikova, O. (2022a). Comparative analysis of the mental state of athletes for risk-taking in team sports. *Journal of Physical Education and Sport*, 22(4), 848-857. <https://doi.org/10.7752/jpes.2022.04107>
- Popovych, I., Halian, I., Halian, O., Nosov, P., Zinchenko, S., & Panok, V. (2021b). Research on personality determinants of athlete's mental exhaustion during the ongoing COVID-19 pandemic. *Journal of Physical Education and Sport*, 21(4), 1769-1780. <https://doi.org/10.7752/jpes.2021.04224>
- Popovych, I., Halian, I., Pavliuk, M., Kononenko, A., Hrys, A., & Tkachuk, T. (2022b). Emotional quotient in the structure of mental burnout of athletes. *Journal of Physical Education and Sport*, 22(2), 337-345. <https://doi.org/10.7752/jpes.2022.02043>
- Popovych, I., Hoi, N., Koval, I., Vorobel, M., Semenov, O., Semenova, N., & Hrys, A. (2022c). Strengthening of student youth's mental health using play sports. *Journal of Physical Education and Sport*, 22(6), 1384-1395. <https://doi.org/10.7752/jpes.2022.06174>
- Popovych, I., Hrys, A., Hoian, I., Mamchur, I., Babenko, A., & Fedyk, O. (2022d). Successfulness in teenagers' sporting activities: comparative analysis of individual and team sports. *Journal of Physical Education and Sport*, 22(11), 2886-2897. <https://doi.org/10.7752/jpes.2022.11365>
- Popovych, I., Kurova, A., Koval, I., Kazibekova, V., Maksymov, M., & Huzar, V. (2022e). Interdependence of emotionality, anxiety, aggressiveness and subjective control in handball referees before the beginning of a game: a comparative analysis. *Journal of Physical Education and Sport*, 22(3), 680-689. <https://doi.org/10.7752/jpes.2022.03085>

- Popovych, I., Pavliuk, M., Hrys, A., Sydorenko, O., Fedorenko, A., & Khanetska, T. (2021c). Pre-game expected mental states in men's mini-football teams: a comparative analysis. *Journal of Physical Education and Sport*, 21(2), 772-782. <https://doi.org/10.7752/jpes.2021.02096>
- Popovych, I., Prytuliak, O., Dushka, A., Beregova, N., Ihumnova, O., & Dzhyhun, L. (2022f). Players of male teams' resilience: comparative analysis of content parameters. *Journal of Physical Education and Sport*, 22(7), 1581-1589. <https://doi.org/10.7752/jpes.2022.07199>
- Popovych, I., Semenov, O., Hrys, A., Aleksieieva, M., Pavliuk, M., & Semenova, N. (2022g). Research on mental states of weightlifters' self-regulation readiness for competitions. *Journal of Physical Education and Sport*, 22(5), 1134-1144. <https://doi.org/10.7752/jpes.2022.05143>
- Popovych, I., Shevchenko, A., Galvez, L. M., Klenina, K. (2021d). Research of the relationship between social desirability and value orientations of adolescents. *Revista Notas Históricas y Geográficas*, 26, 241-268.
- Popovych, I., Shcherbak, T., Kuzikova, S., Blynova, O., Nosov, P., & Zinchenko, S. (2021e). Operationalization of tactical thinking of football players by main game roles. *Journal of Physical Education and Sport*, 21(5), 334, 2480-2491. <https://doi.org/10.7752/jpes.2021.05334>
- Popovych, I. S., Zavatskyi, V. Yu., Geyko, Ie. V., Halian, O. I., Zavatskyi, Yu. A., & Radul, I. H. (2019c). Research on the Structure, Variables and Interdependence of the Factors of Tourists' Mental States of Expectation for Leisure in Ukraine. *Revista ESPACIOS*, 40(37), 2.
- Smoldovskaya, I. O. (2022). Development and statistical verification of a psychodiagnostic questionnaire of an athlete's motivational orientation. *Physical education and sports training*, 2(40), 85-92.
- Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition, and Personality*, 9, 185-211.
- Solovey, O., Ben, A., Dudchenko, S., Nosov, P. (2020). Development of control model for loading operations on Heavy Lift vessels based on inverse algorithm. *Eastern European Journal of Enterprise Technologies*, 5/2(107), 48-56. <https://doi.org/10.15587/1729-4061.2020.214856>
- Strykalenko, Y., Huzar, V., Shalar, O., Voloshynov, S., Homenko, V., & Svirida, V. (2021). Physical fitness assessment of young football players using an integrated approach. *Journal of Physical Education and Sport*, 21(1), 360-366. <https://doi.org/10.7752/jpes.2021.01034>
- Sukys, S., Tilindienė, I., Cesnaitienė, V. J., & Kreivytė, R. (2019). Does Emotional Intelligence Predict Athletes' Motivation to Participate in Sports? *Perceptual and Motor Skills*, 126(2), 305-322. <https://doi.org/10.1177/0031512518825201>
- Vavryniv, O. S., & Yaremko, R. Y. (2022). Empathy as a factor in the development of personal components of future rescuers' professional self-realization. *Insight: the psychological dimensions of society*, 8, 56-69. <https://doi.org/10.32999/2663-970X/2022-8-5>
- Zinchenko, S., Moiseienko, V., Tovstokoryi, O., Nosov, P., & Popovych, I. (2021). Automatic Beam Aiming of the Laser Optical Reference System at the Center of Reflector to Improve the Accuracy and Reliability of Dynamic Positioning. In: Hu, Z., Petoukhov, S., Dychka, I., He, M. (eds). *Advances in Computer Science for Engineering and Education IV. ICCSEEA 2021. Lecture Notes on Data Engineering and Communications Technologies*, 83. Springer, Cham. https://doi.org/10.1007/978-3-030-80472-5_1
- Zinchenko, S., Tovstokoryi, O., Ben, A., Nosov, P., Popovych, I., & Nahrybelnyi, Y. (2022a). Automatic Optimal Control of a Vessel with Redundant Structure of Executive Devices. In: Babichev S., Lytvynenko V. (eds). *Lecture Notes in Computational Intelligence and Decision Making. ISDMCI 2021. Lecture Notes on Data Engineering and Communications Technologies*, 77. Springer, Cham.
- Zinchenko, S., Tovstokoryi, O., Nosov, P., Popovych, I., & Kyrychenko, K. (2022b). Pivot Point position determination and its use for manoeuvring a vessel. *Ships and Offshore Structures*, <https://doi.org/10.1080/17445302.2022.2052480>