

Pre-game expected mental states in men's mini-football teams: a comparative analysis

IHOR POPOVYCH¹, MARIIA PAVLIUK², ANTONINA HRYS³, OLGA SYDORENKO⁴, ALLA FEDORENKO⁵, TETIANA KHANETSKA⁶

¹Kherson State University, Kherson, UKRAINE

²Interregional Academy of Personnel Management, Kyiv, UKRAINE

³Kostiuk Institute of Psychology of the NAPS of Ukraine, Kyiv, UKRAINE

^{4,5,6}National Pedagogical Dragomanov University, Kyiv, UKRAINE

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Abstract:

The aim of the paper is to present empirical research on pre-game expected mental states of mini-football players by means of valid psycho-diagnostic instruments before and after a competition; to compare the empirical results of the winners and losers (n=448). The research methods: content-analysis, tests with standardized questionnaires, factor analysis ANOVA with Varimax rotation. Factor analysis was used to determine pre-game expected mental states of the mini-football players who won (n=178) and mental states of those athletes who lost the game (n=176), the empirical data on the drawn games were not processed (n=94). The structure of pre-game expected mental states of the winners was created. The main state in this structure is F1 "Value-sense self-regulation" (23.51%), related to F2 "Pragmatic self-regulation" ($r_s=.398$; $p\leq.01$) and F3 "Convergent self-regulation" ($r_s=.352$; $p\leq.01$). The structure of pre-game expected mental states of the athletes who lost the game was also created. The main mental state in this structure is F1 "Pragmatic-moderate self-regulation" (15.05%), related to F2 "Distant self-regulation" ($r_s=.394$; $p\leq.01$) and F3 "Sense-internal self-regulation" ($r_s=.322$; $p\leq.01$). We determined that the most stable correlations in the factor structure of pre-game expected mental states of the mini-football players who lost the game are F2 "Distant self-regulation" (F1, F3, F4, F5, F6 and F8). We maintain that this mental state is the biggest danger for an athlete and a team game. The study substantiates the importance of training staff's ability to identify pre-game mental states of athletes and make efficient corrections before and in the course of a game. It describes content features of a regulatory function of athletes' mental states in competition activities. There search proves that training staff's ability to take into consideration pre-game expected mental states of mini-football players and construct probable scenarios of the course of events allows reacting in time and change the course of a competition positively. The obtained results can be useful for training staff, sports managers, and everyone who is engaged in training and managing mini-football and football clubs, and also for researchers in psychology of physical education and sport.

Keywords: Sports performance, tactics training, training process, pre-game expectations, mental state of expecting a victory.

Introduction

The reasons for success and failure in sports events, great victories and defeats, Olympic triumphs and fiascos are not only needs, motives and volitional characteristics of an athlete's personality, but also their mental states. Mental states are changeable, emotionally rich states, arising during training, competition, sports and recovery activities and determine psycho-emotional readiness of an athlete. Mental states of athletes combine their conscious and unconscious intentions. For instance, maintaining an optimal morale plays a key role for representatives of team sports games to achieve success (Alekseev, 2006; Gomez-Piqueras et al., 2019). An athlete's mental state is a regime of vital activity that has certain energy parameters and at a psychological level it represents a system of attitudes, convictions, beliefs and expectations that provide a particular reception of the surroundings (Popovych, 2017).

Pre-game expected mental states of mini-football players are a specific kind of mental states that involve needs, motivation, volitional mental processes and characteristics of an athlete before a game. This pre-game complex that includes mental characteristics, processes and states is dominant and determinant. The first successful minutes of a team game, the ability to capture the center of a football pitch, dictate their tactics, start fulfilling a trainer's instructions from the very beginning are key things in a team game. Realization of them by a mini-football team depends on a number of factors. In particular, it depends on pre-game expected state of team players. It is also necessary for a representative of training staff to pay attention to the pre-game mental states and atmosphere prevailing in the warm-up of a competitor team. In order to ensure a victory of a mini-football team,

a trainer must possess solid background in psychology and pedagogy of game sports, sporting activities, psycho-pedagogy of sport in particular (Gorbunov, 2012), be aware of individual psychological and volitional characteristics and abilities of each mini-football player, but sometimes it is not sufficient. For a successful performance of a mini-football team it is also necessary that a coach identify a mental state of each player before a game properly, even if an application for the game has been confirmed in advance. It is especially important when a team participates in a long tournament and struggles for prize winning places. All the psychological knowledge that can be operationalized in a training process quickly and efficiently is of special importance. The knowledge of a factor structure of pre-game expected mental states of mini-football players are referred to such a category of knowledge. We determined that achievement of expected results directly depends on the kind of a mental state of expectations (Khmil & Popovych, 2019). There are studies that substantiate that sometimes the necessity to act becomes a kind of psychological stress that accompanies the process of achieving results (Izard, 1991). We established that mental states of expectations accompany the process of acquiring knowledge and skills, developing competences in educational and professional activities and are accompanied with a number of features of the mental state of an expected activity (Popovych et al., 2019a). Some scientific studies examine and describe transformation of stable dynamic characteristics into personality traits and vice versa that occurs not only in sport but also in other human activities (Popovych et al., 2019c). Another study empirically proves that mental states of individuals conform to their needs and aspirations, to their potential and resources. It, in its turn, maintains their development in particular conditions (Prokhorov et al., 2015).

Currently there is no common position concerning the problem of mental states in sports activities. Mental states of an athlete's personality can be considered in two aspects. They are both cross-sections of an athlete's dynamics and their integral reactions, caused by relationships, behavioral needs, aims of activeness and adaptiveness in the environment (Kulikov, 2001).

In team sports, in mini-football in particular, there are studies on mental states of expecting a victory in men's mini-football teams. One research emphasizes mental states of expecting a victory and presents their factor structure (Popovych et al., 2019b). However, the issue of pre-game expected mental states of sports men who lost has not been examined thoroughly yet. Another study analyzes the types of pre-game expectations of athletes of team sports and determines prevalence of internality of pre-game expectations – 30.09%, activeness – in 35.09% of the athletes and openness in 44.09% of the research participants. The types of pre-game expectations of the sportsmen of a non-contact game sport (volleyball) and contact game sports (football, mini-football and handball) were compared and no significant differences were identified (Popovych et al., 2020e).

The research on individual psychological characteristics of the players of a football team depending on the role of a game (Abbott et al., 2018; Pshenychna et al., 2019), the research on movement activities of athletes of professional football teams (Gamble et al., 2019; Lebediev et al., 2019) are of special scientific interest.

The results of the research conducted on young athletes are considered to be significant: the one determining pedagogical conditions necessary for effective speed-strength training of young football players 15-17 years old (Bolotin & Bakayev, 2017a; 2017b); examining the dynamics of psychophysiological functions and indexes of physical and technical readiness in young football players aged 12-13 and 15-16 years during a 3-month training process (Kozina et al., 2019); comparative analysis of the speed of a ball movement in different positions for a kick with feet with a dominant and non-dominant foot in younger football players (Marqueset et al., 2011); the dynamics of physical training and recovery for young female athletes aged 12-13 years (Galanet et al., 2020).

Another research outlines content features of the impact of sports training on physical and technical preparedness of football players (Shalar, et al., 2019). The modern studies pay attention to the correlation of posture balance with personality traits and temperament of highly efficient football players (Wojciechowska-Maszkowska et al., 2020); examine technical, tactical and dynamic characteristics of scoring goals in elite men's football leagues (Pratset et al., 2018); relationship between time and goal scoring (Evangelos et al., 2018).

The research theoretically substantiates and empirically examines that expectations as an individual's mental state reflect the correlation of subjective reality in a situation of interaction and an individual's idea about him/herself and about participants of the interaction as subjects of behavior in this situation (Popovych & Blynova, 2019a).

The authors consider a pre-game expected mental state of mini-football players as an integral complex of available characteristics of participants of a meeting that affects the course of events and the result of a mini-football game.

Theoretical analysis of sports scientific literature shows that the problem of pre-game expected mental states in mini-football teams is topical and requires thorough methodological analysis and empirical measurement.

Hypothesis. We consider the structure, variables and interdependence of the factors of pre-game expected mental states in men's mini-football teams to be important components of efficient tactical and technical training of mini-football players; the use of the research results will assist in developing the ability of training staff to construct probable scenarios of the course of events, and allow reacting in time and changing the course of a competition positively.

Aim. To conduct empirical research on pre-game expected mental states of mini-football players before and after a competition; to compare the empirical results of the winners and losers.

Material and methods

Methodological foundations of the empirical research on pre-game expected mental states of mini-football players before and after a competition include examination of psychological regularities and mental states in sport (Popovychetal., 2019b; 2020b), competition (Strykalenkoetal., 2020), training (Chebanetal., 2020a; 2020b; 2020c;Prontenko et al., 2017a; 2017b; 2019), educational-professional (Popovychetal., 2020c; 2020d; 2021a; 2021b) and other human activities (Blynova&Kruglov, 2019; Blynovaet al., 2019; Khmiliaretal., 2020; Solovey et al., 2020; Nosovetal., 2020a; 2020b; Popovychetal., 2019c; Zinchenko et al., 2020). Methodological foundations are related to safety of competition space (Blynovaetal., 2020; Popovychetal., 2020a). We took into account the specificity of organizing research presented in the studies related to extreme trials (Kuzikovaetal., 2020a; 2020b; Kyslenko et al., 2017) and training with excessive loads of elite athletes (Abbott et al., 2018; Beckfordetal., 2016; Smpokos et al., 2018; Strykalenkoetal., 2019; 2021). Thepsycho-diagnostic complex reflected the subject of the research on pregame expected mental states of mini-football players relevantly. The above-mentioned studies are important in the context of the empirical research on pregame expected mental states men’s mini-football teams.

Participants. Our researchers deal with the mini-football team of the extra-league of the Association of mini-football in Ukraine: “Prodeksim” (Kherson); the higher league of the Association of mini-football in Kherson region (Ukraine): “Wezom”, “Feniks”, “Skif”, “Khliba Khersonshchyny”, “Riativnyk”, “Antserhlob”; the first league of the Association of mini-football in Kherson region (Ukraine):“Dzhoker”, “Yug Svet”, “Prykordonnyk”, “Duma”, “Traktor”, “Yednist”, “JoyTravel”; the first league of the Association of mini-football in Mykolaiv region (Ukraine):“Offer”, “Oscar”, “Osvita-2000”, “Pryvokzalka”, “Sobornist”, “Dynamo”. The average age of the respondents was 27.1 years. The sample consisted of 448 athletes, 178 of them took part in the research on a factor structure of pre-game expected mental states of winners and 176 individuals participated in the research as losers. A draw was recorded in 94 participants. The research was conducted according to ethical standards of committee on the rights of experiments of Helsinki declaration (2013).

Instruments. The psycho-diagnostic complex of the researched included valid methods and questionnaires with a high reliability. The questionnaire “The Level of Social Expectations” (“LSE”) (Popovych, 2017) was used to determine the awareness of the mini-football players of a probable scenario of events, of the attitude of the interaction participants and the level of an expected result of the game. The questionnaire was based on a bipolar semantic scale. The indexes of α -Cronbachwere: $\alpha_{LSE} = .807$. Another psycho-diagnostic instrument included in our complex was the coping test “Way of Coping Questionare” (“WCQ”) (Lazarus & Folkman, 1984; adapted by Kriukovaand Kuftiak, 2004). The respondents determined prevalent coping strategies before a mini-football competitionby means of the coping test. 8 coping strategies were suggested: confrontation, distantiating, self-control, seeking social support, accepting responsibility, avoidance, planning to solve a problem, positive over estimation. The respondents’ choices of coping strategies allowed reflecting content parameters of a pre-game mental state properly. The irresponses were evaluated by means of a bipolar semantic differentiation scale ranging from -3 (totally disagree) to +3 (absolutely agree). The index of α -Cronbach was $\alpha_{WCQ}=.775$. We used the test“PIL”(Leontiev, 2006) to determine the respondents’ localization in the past, present and future in a sense-value dimension. The index of α -Cronbach was $\alpha_{PIL}=.882$. The method “Motivation of professional activity” (“MPA”) (Rean, 2008) was used to determine a prevalent type of the mini-football players’ motivation. The reliability index of α -Cronbachwas $\alpha_{MPA}=.709$. The content-analysis performed before and after the game made it possible to determine the characteristics of the mini-football players’ expected mental states. The methods “Expected Situation”/“Realization of Expectations” (Popovych, 2017) involved a dichotomic measurement scale. The index of α -Cronbach was $\alpha=.873$. We can generalize that α -Cronbach data by all the psycho-diagnostic instruments were within allowable limits 0.7-0.9

Procedures. The empirical cross-sections were performed by a group of researchers during October 2020–January 2021. The organizers of the research randomly chose games of championship tournaments and mini-football cup games. At the initial stage of the research 448 mini-football players were involved. Further the data on the football players who had drawn were excluded. We did not consider even those games with a draw, which played an important tournament role and one of the teams was pleased with a draw. The permission to conduct empirical research was given by the training staff of the team “Prodeksim” (Kherson, Ukraine), the Association of mini-football in Kherson region (Ukraine), the Association of mini-football in Mykolaiv region (Ukraine) in advance.

*Statistical analysis.*Mathematical processing of the obtained empirical data was performed with the program “SPSS” v. 23.0. Correlations were determined by Spearman’s coefficient (r_s). The use of factor analysis ANOVA with Varimaxrotation allowed establishing a matrix of factor loadings. Arithmetic mean (M) and mean-square deviation (CD) were calculated. Student’st-test was used to measure a statistical difference between the groups of mini-football players. The differences between the values of the research valuables were considered statistically significant at the level of $p \leq .05$ and $p \leq .01$.

Results

We evaluated the obtained results of the research parameters guided by the scales of the arithmetic mean (M) andthe mean-square deviation (SD), given inTable. 1.

Table 1. The correlation of the values by the scales of the research parameters in the mini-football winners and losers

Scale	Mini-football winners (n=178)		Mini-football losers (n=176)	
	M	SD	M	SD
Level of Social Expectations of Personality (LSEP)	67.15	12.01	61.05	11.12
Level of Awareness of the Expected Events (LAEE)	16.78	3.01	16.18	2.85
Level of the Expected Attitude Towards the Participants of Interpersonal Interaction (LEATPII),	13.93	1.67	13.03	1.44
Level of the Expected Performance (LEP)	36.44	8.12	31.84	7.33
Confrontation (C)	46.12	19.27	47.18	19.32
Distantiating (D)	49.67	25.01	50.67	25.09
Self-Control (SC)	70.51	16.12	71.51	16.19
Seeking Social Support (SSS)	39.61	21.03	39.12	21.01
Accepting Responsibility (AR)	52.93	21.05	53.93	21.55
Avoidance (A)	46.79	26.06	47.12	26.42
Planning to Solve a Problem (PSP)	62.99	20.34	62.23	20.24
Positive Overestimation (PO)	48.55	19.01	47.56	18.87
LifeGoals (LG)	31.56	7.04	30.46	7.01
Process (P)	29.42	5.12	28.42	5.21
Result (R)	24.86	4.87	26.86	5.02
Locus of Control – Life (LCL)	20.67	4.34	19.67	4.14
Locus of Control – Self (LCS),	29.95	4.13	30.05	4.21
General Awareness of Life (GAL)	102.57	14.34	101.94	14.11
Internal Motivation (IM)	3.54	1.20	3.43	1.17
External Positive Motivation (EPM)	4.21	1.04	4.20	1.04
External Negative motivation (ENM)	4.05	1.03	4.18	1.03
Internality/Externality (I/E),	.49	.19	.47	.18
Activeness/Passiveness (A/P)	.49	.19	.47	.18
Openness/Closeness (O/C)	.69	.22	.67	.22
Adequacy/Inadequacy (A/I)	.61	.22	.59	.22

Note: M – arithmetic mean; SD – mean-square deviation.

The obtained empirical data were compared to the standards suggested by the authors of the methods. We maintain that our data conform to the standards recommended by the methods “LSE”, “WCQ”, “PIL”, “MPA” and “Expected Situation”/“Realization of Expectations”.

At the next stage the sample of the mini-football winners Group 1 (n=178) was compared to the sample of the mini-football losers Group 2 (n=176) by the arithmetic mean (M) of all the research parameters. Student’s t-test was used to measure a statistical difference (see Table 2).

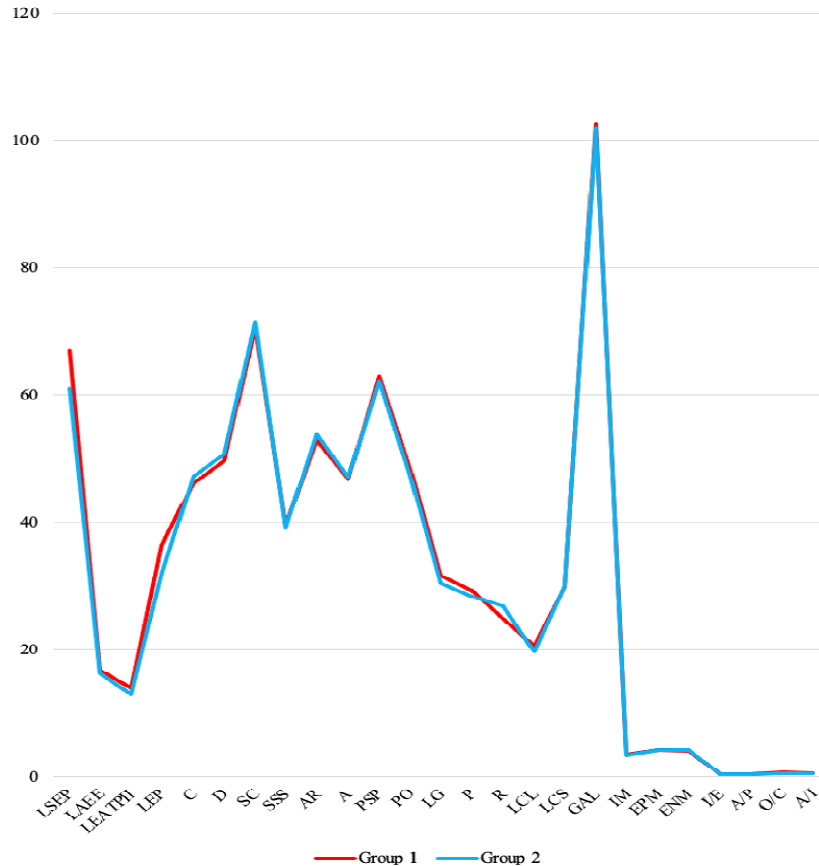
Table 2. Differences between the groups by the arithmetic mean (M) of the research parameters

Scale	Group 1 (n=178)	Group 2 (n=176)	t-criterion	Level of significance
Level of Social Expectations of Personality (LSEP)	67.15	61.05	2.09	p < .05
Level of Awareness of the Expected Events (LAEE)	16.78	16.18	1.24	–
Level of the Expected Attitude Towards the Participants of Interpersonal Interaction (LEATPII),	13.93	13.03	1.22	–
Level of the Expected Performance (LEP)	36.44	31.84	2.23	p < .05
Confrontation (C)	46.12	47.18	1.12	–
Distantiating (D)	49.67	50.67	1.13	–
Self-Control (SC)	70.51	71.51	1.22	–
Seeking Social Support (SSS)	39.61	39.12	1.25	–
Accepting Responsibility (AR)	52.93	53.93	1.12	–
Avoidance (A)	46.79	47.12	1.17	–
Planning to Solve a Problem (PSP)	62.99	62.23	1.16	–
Positive Overestimation (PO)	48.55	47.56	1.11	–
LifeGoals (LG)	31.56	30.46	1.09	–
Process (P)	29.42	28.42	1.14	–
Result (R)	24.86	26.86	1.45	–
Locus of Control – Life (LCL)	20.67	19.67	1.25	–
Locus of Control – Self (LCS),	29.95	30.05	1.09	–
General Awareness of Life (GAL)	102.57	101.94	1.08	–

Internal Motivation (IM)	3.54	3.43	1.07	–
External Positive Motivation (EPM)	4.21	4.20	1.04	–
External Negative Motivation (ENM)	4.05	4.18	1.06	–
Internality/Externality (I/E),	.49	.47	1.03	–
Activeness/Passiveness (A/P)	.49	.47	1.03	–
Openness/Closeness (O/C)	.69	.67	1.02	–
Adequacy/Inadequacy (A/I)	.61	.59	1.02	–

Note: Group 1 – mini-football winners; Group 2 – mini-football losers; M – arithmetic mean; t-criterion – Student’s t-test.

The diagram of the differences between the groups under study is presented below (see Fig. 1).



Note: Group 1 – mini-football winners; Group 2 – mini-football losers.

Figure 1. The diagram of the differences between Group 1 and Group 2 by the research parameters

Statistically significant differences between the groups under study– Group 1 and Group 2 – were determined by two parameters: LEP ($t=2.23$; $p < .05$) and LSEP ($t=2.09$; $p < .05$). We maintain that an expected result of activity and a general level of expectations are the most sensitive empirical measurements that can be registered immediately before a game. The rest of the parameters are certainly important and have a high assimilation capability. The differences by all the other parameters are also available but they are not significant ($p > .05$). Probably, there are reasons to consider that all the other parameters have a static character, unlike LEP and LSEP.

We should pay attention to a dynamical character of the situation preceding the research, since the empirical cross-section was performed in a certain situation restricted in time and space which combined a complex of parameters of the mini-football players expecting a competition. Further, using factor analysis ANOVA, we determined the mini-football players’ pre-game expected mental states and differences between the groups.

We performed factor analysis by the respondents’ research parameters, the mini-football winners (Group 1) and the mini-football losers (Group 2) individually, and the results are given in Tabl. 3.

Table 3. The results of factor analysis of pre-game expected mental states Group 1 and Group 2

Group 1 (n=178)					Group 2(n=176)			
Factors	V	D	ΣD		Factors	V	D	ΣD
F1 "Value-senseself-regulation"	6.012	23.51	23.51		F1 "Pragmatic-moderate self-regulation"	5.452	15.05	15.05
F2 "Pragmatic self-regulation"	3.751	14.67	38.18		F2 "Distant self-regulation"	4.274	11.80	26.85
F3 "Convergent self-regulation"	2.636	10.31	48.49		F3 "Sense-internal self-regulation"	3.177	8.77	35.62
F4 "Cognitive self-regulation"	2.213	8.65	57.14		F4 "Processual self-regulation"	2.862	7.90	43.52
F5 "Distant self-regulation"	1.801	7.04	64.18		F5 "Affiliation self-regulation"	2.398	6.62	50.14
F6 "Affiliation self-regulation"	1.199	4.69	68.87		F6 "Convergent self-regulation"	2.003	5.53	55.67
F7 "Processual self-regulation"	1.178	4.61	73.48		F7 "F3 "Sense-external self-regulation"	1.788	4.93	60.60
-					F8 "Cognitive self-regulation"	11.488	54.10	964.70
-					F7 "Confrontation self-regulation"	11.038	52.86	967.56

Note: Group 1 – mini-football winners; Group 2 – mini-football losers; V – value; D – dispersion; ΣD – sum dispersion.

In Group 1 seven factors have their own values greater than unity and explain 73.48% of dispersion of the variables. In Group 2 there are nine factors with their own values greater than unity, making 67.56% of dispersion of the variables. The following factors in Group 1 and Group 2 have loadings less than .979. The psycho-diagnostic complex consisting of twenty-five psychological parameters is methodologically substantiated and makes it possible to characterize pre-game expected mental states efficiently. The scale titles reflect the essence of the research subject. It is proved by the following scales: LSEP – the level of social expectations of personality; LAEE – the level of awareness of the expected events; LEATPII – the level of the expected attitude towards the participants of interpersonal interaction; LEP – the level of the expected performance; IM – internal motivation; EPM – external positive motivation; ENM – external negative motivation; PSP – planning to solve a problem; PO – positive overestimation.

F1 "Value-senseself-regulation" (Group 1) indicates to the pre-game expected mental state of the players for whom mini-football is a meaning of life and a value. These parameters are essential for reaching a victory result. In the mini-football winners the mental state F1 "Pragmatic-moderate self-regulation" (Group 2) had the highest loading (V=5.452; 15.05%). Probably, pragmatic moderate intentions are the mental state of pre-game expectations, that is capable of assisting an athlete to achieve a desirable aim and at the same time it causes a great disappointment in case of a defeat.

The second pre-game expected mental state in terms of loading (V=3.751; 14.67%) characteristic of the mini-football winners is F2 "Pragmatic self-regulation" (Group 1). Certainly, a pragmatic component is important in achieving success and it depends on a competitor of that team. F2 "Distant self-regulation" (Group 2) is accompanied by the mini-football players' aspiration to distantiate at the time of difficulties (the scale of the coping test "WCQ"). This mental state has a negative correlation with self-control and contradicts a plan for the game. The mini-football players with the pre-game expected state of distant self-regulation should not be included in a starting line-up and even allowed to be a substitute. Such athletes usually disrupt organization of a team game that is extremely negative. Their actions can also provoke a caution or exclusion making it difficult to win in a competition.

F3 "Convergence of a victory" (Group 1) is a pre-game expected mental state related to the aspiration for cardinal changes of events. It is negatively loaded with "the strategy of escape" (the scale of the coping test "WCQ") and reflects an athlete's intention to affect a probable scenario of events convergently. F3 "Sense-internal self-regulation" (Group 2) shows dependence of a mental state on an athlete's meaning of life and value orientations which are too internalized. It is evident that such a complex could prevent from achieving an aim. At the same time, we identified a pre-game expected mental state F7 "Sense-external self-regulation" (Group 2) that is a combination of meaning of life orientations and externality. It is obvious that such a combination of meaning of life orientations cannot ensure a desirable high result.

In both groups there is "Cognitive self-regulation". It is necessary to identify mental state of a victory or defeat. Firstly, this state is related to deep awareness of the previous course of events, a prevalent cognitive orientation towards the aim; secondly, it is based on a high degree of internal motivation. The pre-game expected state of other team members is very important. Under certain circumstances such mini-football players help their team win and at the same time they are not capable of taking responsibility for the game, when the team is not

satisfied with the result, though they understand that somebody should do it. In both groups there is also a mental state of “Affiliation self-regulation”, characterized by an athlete’s aspiration to demonstrate everything they are able to do. Partly such athletes had a negative impact on the mood for a game, break the plan of a game and confront with other players. In difficult situations mini-football players seek social support that makes them confront. Certainly, it has nothing to do with a problem-solving plan. In a general team picture of a game such athletes can make a victory bright, but when their team is in a tough situation, they are not helpful. Such players would rather seek justification in their eyes and other people’s eyes. The pre-game expected mental state “Processual self-regulation” has a negative correlation with an expected result of activity. Such athletes are usually oriented towards a processual component of a competition. At the same time, such mini-football players follow the game tactics better, that is positive and can lead to a team success under favorable conditions. Other mental states have a small share in the factor structure therefore we did not focus on them.

Further we should establish correlation of the factors determining the structure of pre-game expected mental states of the mini-football winners (Group 1) (see Tabl. 4).

Table 4. Correlation matrix of the factor structure of pre-game expected mental states Group 1

Factors	1	2	3	4	5	6	7
1	1.000	.398**	.352**	.129**	.041	.131**	.149**
2	.398**	1.000	.252**	.221**	.103*	.096*	-.034
3	.352**	.252**	1.000	.244**	.061	.011	.149**
4	.129**	.221**	.244**	1.000	-.089*	-.061	.199**
5	.041	.103*	.061	-.089*	1.000	.109**	-.066
6	.131**	.096*	.011	-.061	.109**	1.000	.011
7	.149**	-.034	.149**	.199**	-.066	.011	1.000

Note: * – statistical significance of $p \leq .05$; ** – statistical significance of $p \leq .01$.

We maintain that the most stable relationships are characteristic of the following factors: F1 and F2 (.398), F1 and F3 (.352). The most significant correlations are ($p \leq .01$) correlations between F1 “Value-senses self-regulation” and F2 “Pragmatic self-regulation” (.398), F1 “Value-senses self-regulation” and F3 “Convergent self-regulation” (.352). The pre-game expected mental state F1 has the largest number of significant relationships with F1, F3, F4, F6 and F7. Thus, value-senses self-regulation is an important component in a structural and functional organization of pre-game expected mental states leading to a victory. The most dependent factors in the structure of mental states are: F1, F2 and F4.

We should also establish interdependence of the factors determining the structure of pre-game expected mental states of the mini-football losers (Group 2) (see Tabl. 5).

Table 5. Correlation matrix of the factor structure of pre-game expected mental states Group 2

Factors	1	2	3	4	5	6	7	8	9
1	1.000	.394**	.322**	.129**	.030	.127**	.137**	-.047	.066
2	.394**	1.000	.222**	.235**	.099*	.096*	-.048	-.151**	.012
3	.322**	.222**	1.000	.167**	.012	.045	.142**	-.242**	.023
4	.129**	.235**	.167**	1.000	-.075*	-.049	.201**	-.011	.039
5	.030	.099*	.012	-.075*	1.000	.109**	-.022	-.011	-.029
6	.127**	.096*	.045	-.049	.109**	1.000	.011	-.033	-.198**
7	.137**	-.048	.142**	.201**	-.022	.011	1.000	-.054	-.139**
8	-.047	-.151**	-.242**	-.011	-.011	-.033	-.054	1.000	-.233**
9	.066	.012	.023	.039	-.029	-.198**	.139**	-.233**	1.000

Note: * – statistical significance of $p \leq .05$; ** – statistical significance of $p \leq .01$.

We maintain that the most stable relationships are characteristic of the following factors: F1 and F2 (.394), F1 and F3 (.322). The most significant correlations ($p \leq .01$) are correlations between F1 “Pragmatic-moderate self-regulation” and F2 “Distant self-regulation” (.394), F1 “Pragmatic-moderate self-regulation” and F3 “Sense-internal self-regulation” (.322). The pre-game expected mental state F2 “Distant self-regulation” has the largest number of significant relationships with F1, F3, F4, F5, F6 and F8. Thus, distant self-regulation is the most dangerous component in a structural and functional organization of pre-game expected mental states and leads to a defeat. The most dependent factors in the structure of expected mental states are: F1, F2, F3 and F4.

Discussion

There is a lack of studies on pre-game expected mental states of athletes in team and individual sports. Since a mental state is a complex psychophysiological formation that becomes stable and transforms into a personality trait (Izard, 1991). Pre-game expected mental states constitute content features of an athlete’s regulatory function. In the course of a long-term training, are regulatory function of mental states becomes a key function in their competition activities. A prevalent pre-game expected mental state affects the content of sporting activities

and the result of a mini-football match. Prevalent pre-game mental states of athletes have a crucial impact not only on a particular match. They are capable of influencing a tournament and a mini-football player's career. We consider distantness to be a psychological protective phenomenon (Lazarus&Folkman, 1984). Distantness is a protective mechanism in a difficult situation. A difficult situation occurs in the first minutes of a contest as a protection against a competitor's pressing. An athlete's inability to follow the mood for a game, and fight for the position, induces them to use protective mechanisms, distantness in particular. Distant self-regulation ruins the plan for a game and partly causes a defeat. Such mini-football players pose a danger for a well-coordinated team game.

We maintain that the variables of pre-game expected mental states and the correlations between the mini-football players' factors are the demonstration of their levels of regulatory abilities. Thus, a pre-game expected mental state affects an expected result. An expected result is designed by an athlete and a trainer before a game and is a peculiar model of the expected future (Popovych, 2017) and optimal readiness (Alekseev, 2006). The obtained empirical results are proved by the research on mini-football players' mental states of expecting a victory (Popovych et al., 2019b), the research on pre-game types of expectations (Popovych et al., 2020c), the studies on a regulatory function of mental states in different types of human activities (Silvia et al., 2009) and the research on the structure of cognitive and mental resources of personality (Popovych&Blynova, 2019b).

The obtained empirical results confirm the hypothesis that the structure, variables and interdependence of the factors of pre-game expected states are important components of efficient tactical-technical training of mini-football players. We expect that the obtained results will assist training staff with efficient construction of probable scenarios of events, enable them to react in time and change the course of a contest, leading to a desirable result.

Conclusions

1. Pre-game expected mental states are a special kind of mental states that combine need, motivation, volitional mental processes and characteristics of mini-football players before a game. A pre-game complex that includes mental characteristics, processes and states of team members is prevalent and determinant in a sport contest. The first success fulminates of a mini-football game depend on a number of factors, in particular, on pre-game expected mental states of mini-football players.

2. Factor analysis allowed determining pre-game expected mental states of the mini-football players who won ($n=178$). We created a structure of pre-game expected mental states of the winners. The main factor in this structure is F1 "Value-sense self-regulation" (23.51%), correlated with F2 "Pragmatic self-regulation" ($r_s=.398$; $p\leq.01$) and F3 "Convergent self-regulation" ($r_s=.352$; $p\leq.01$).

3. We established that the most stable relationships in the factor structure of pre-game expected mental states of mini-football players who won are characteristic of F1 "Value-sense self-regulation" (F1, F3, F4, F6 and F7).

4. Factor analysis also enabled us to determine pre-game expected mental states of mini-football players who lost ($n=176$). We created a structure of pre-game expected mental states of the mini-football losers. The main factor in this structure is the mental state F1 "Pragmatic-moderate self-regulation" (15.05%), correlated with F2 "Distant self-regulation" ($r_s=.394$; $p\leq.01$) and F3 "Sense-internal self-regulation" ($r_s=.322$; $p\leq.01$).

5. We established that the most stable relationships in the factor structure of pre-game expected mental states of mini-football players who lost are characteristic of F2 "Distant self-regulation" (F1, F3, F4, F5, F6 and F8).

6. The ability to identify mini-football players' mental states by training staff and make efficient corrections before a game and during a game affect the course of a competition and assists in reaching a desirable result.

Conflicts of Interest. The authors declare that there is no conflict of interest.

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