

## Time decentrations of junior athletes under changed conditions of competitive activity

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### Abstract:

**The purpose** of the research is to find and substantiate a correlation between time decentrations and self-regulation of junior athletes under changed conditions of competitive activity. **Methods.** The main methods of a summative strategy of the research with elements of comparison were two valid and reliable psycho-diagnostic instruments: an adapted version of the questionnaire “Zimbardo Time Perspective Inventory” (Zimbardo & Gonzalez, 1984) and a modified version of the questionnaire “Style of Self-regulation of Behavior” (Morosanova, 2004). Objective observation and structured interviews with data recorded in specialized protocol forms were supplementary research methods. Standard coefficients were employed to identify statistically significant differences. **Results:** The concept of time decentrations was defined, emphasizing their significance in junior sports. Seventeen statistically significant correlations were established ( $p \leq .050$ ;  $p \leq .010$ ). Temporal decentralization future (TDF) and temporal decentralization positive past (TDPP) exhibited the highest number of correlations, with six each. The strongest positive correlation of TDF with “Planning Training Activity” (PTA) ( $r_s = .311$ ;  $p \leq .010$ ) was established. It was substantiated that the strongest correlation between the dimensions “Planning Training Activity” ( $r_s = .311$ ;  $p \leq .010$ ) with Temporal Decentralization Future in combination with the other two strong ( $p \leq .010$ ) correlations of the dimension “Independence of Decision-Making”: TDF ( $r_s = .302$ ) and TDPP ( $r_s = .221$ ) constitute an efficient self-regulation construct of achieving a victory result under changed conditions of competitive activity. Comparison of self-regulation parameters of respondents of an optimal profile (Group II) and a general profile (Group I) of time decentration was performed. Statistically significant differences ( $p \leq .050$ ;  $p \leq .010$ ) were found by three self-regulation parameters: “Planning Training Activity”, “Modelling Competitive Activity” and “Independence of Decision-Making”. **Discussion and conclusions.** The identified differences between time decentrations possess scientific novelty and are valuable for tactical-technical preparation of junior athletes. Operationalization of the obtained results can increase resourcefulness of junior athletes and create a competitive advantage over rivals under usual and changed conditions of competitive activity.

**Key words:** self-efficacy, adolescence, self-actualization, competitiveness, planning, modelling, behavior.

### Introduction

Time competence of subjects of sporting activities tends to be regarded in contemporary professional and amateur sports as a dominant factor of prospects, self-actualization, planning and modelling of an athlete’s future results, self-realization self-efficacy in society. Contemporary sport is pragmatic, prognostic and forward-looking. Despite permanent search and application of new information technologies, use of artificial intelligence at training and preparation stages (Nagovitsyn et al., 2023), which can not only timely display actual parameters of competitions (video reviews, goals, scores, fouls, foot faults), but also reflect measurements of an athlete’s psycho-physiological state (blood pressure, pulse and resistance), – search of internal resources has always been of scientific value. As a rule, understanding and operationalization of internal resources, especially in junior sports, have been a latent competitive advantage over rivals.

Personal efficiency of an athlete, or self-efficacy by A. Bandura (1997), is determined by their orientation towards investigation and realization of their internal reserves and abilities. We focus attention on the fact the contemporary society is rapidly changing and offering new standards of success and triumph. In turn, a sharp change in standards and trends exacerbates competition between old-timers and juniors, since new technologies are rapidly replacing yesterday’s and even today’s effective methods for achieving results in sports.

Contemporary junior sports want instant success with minimum utilization of resources. Firstly, such success aims at highlighting the value of a junior athlete's personality, demonstrating their authenticity and uniqueness (Popovych et al., 2020a). Undoubtedly, all this concerns the problem of a human being through time and their efficiency in life. Scientific literature considers time perspective to be a temporal order of future events expected by an individual (Plokhikh et al., 2023). A junior athlete preparing for competitions can clearly comprehend their time perspective in any situation of sporting activities: training, competitive and regenerating. It is sufficient for them to focus on the current course of events and rationally evaluate it, i. e. assess the current time acts. It will allow them to register their thought and actions and realize that they relate to the present events, memories and analysis from the past, models and projections oriented towards the future (Plokhikh, 2011). All time perspectives are important for efficient sporting activities. The dominance of one of them in a particular life situation allows talking about time decentration (Khomulenko & Babatina, 2014). F. Zimbardo (2002) paid attention to an individual's desire to structure their time. The researcher found that an individual treats time unconsciously, but they try to structure and attach value to it at a conscious level. Cognitive constructions of consciousness play a special role in structuring life events within the continuum "past-present-future". An individual can actualize these or those events in their current activities only if they attach value to them (Zimbardo, 2002). Adolescence is the best time for sporting activities since it combines new mental and physiological formations characteristic of this age, the development of worldview orientations and self-identification (Popovych et al., 2021d). Presence or absence of statistically significant correlations of time decentrations with self-efficacy of junior athletes will allow taking into consideration the presence/absence of this factor in efficiency of junior athletes' sporting activities. Adolescence is a sensitive period in outlining life prospects, therefore, the abilities to quickly move from the past to the future, plan and forecast hold an important place in any activity of juniors (Bilous & Okhrimenko, 2015).

In a significant number of studies, the research team of I. Popovych et al. (2021b; 2022a; 2023b) showed a statistically significant impact of relevant measurements of dominant mental states, emotions and feelings of respondents on achievement of a victory results (Popovych et al., 2020b), self-actualization (Popovych et al., 2022c), self-regulation (Popovych et al., 2022e; 2022f; Prokhorenko et al., 2023) and efficiency in other types of activity (Popovych et al., 2019b). It is obvious that the ability and readiness to plan and model contributes to successful realization of activity, but such readiness will have various effects in the dimensions of different time decentrations.

There is a study on time perspective of junior athletes as a factor of motivation development in sporting activities (Popovych et al., 2022b). It was found that the time perspective of the Future (F) is dominant in junior athletes and it affects their sport results. A shift of focusing from the present dimension to the future dimension was observed in junior athletes. Another study examines correlations of time perspective with the parameters of attention (Popovych et al., 2023a). It was highlighted that the Future (F) has the largest number of statistically significant correlations and is the most important time perspective. It was found that concentration has the most significant impact on junior athletes' performance in sporting activities of all parameters of attention.

There is a study investigating the impact of planning in adolescence on achievement of high performance in professional sport (Menting et al., 2019). Flexibility and plasticity of junior athletes in combination with physiological characteristics and metabolism contribute to quality results in regenerating and rehabilitating components of sporting activities (Staude & Radzyshevska, 2021; Staude et al., 2023a; 2023b). It also relates to time decentrations and requires taking it into consideration in probable planning: recovery, moderate loads, running, medium loads, training with full loads, experiencing excessive loads and, if necessary, using uneven loads. The outlined retrospective analysis of the research subject and the necessity to establish content determinants and statistically significant correlations under changed conditions of sporting activities possess scientific novelty and practical value.

Time decentrations under changed conditions of sporting activities were regarded as dominant time perspectives of junior athletes. Changed conditions of sporting activities were considered to be external precedent impacts affecting organization and spatio-temporal coordinates of a competitions (time and location of a competition, the size of a sports ground, a competition formula, contest duration, a change in the number of predicted breaks and forced breaks). Additional time regulated by tournament conditions was not regarded as changed conditions of sporting conditions by the research organizers.

**Hypothesis.** 1. Dominant time decentrations have a statistically significant correlation with the parameters of junior athletes' self-regulation. 2. There are significant differences between the parameters of respondents' self-regulation of an optimal profile (Group II) and a general profile (Group I) of time decentration.

**Purpose** of the research is to determine and substantiate a correlation of time decentrations with junior athletes' self-regulation under changed conditions of competitive activity.

## Methods

*Methodology.* Time competence is considered as a component of an individual's temporality. Athletes' temporality is a connection of time instants and characteristics, dynamics of changes in phenomena and processes, determined by socio-cultural specificity of sporting activities (Plokhikh, 2011; 2022). Construction of

an expected model is a process and result of the work of a regulating system of an individual's expected activity (Popovych & Blynova, 2019; Popovych et al., 2021a).

A combined strategy with the elements of modelling a situation of empirical study was applied in the research. Modern studies with the following dimensions were taken into consideration: 1) psychological and genetic (Hudimova, et al., 2021; Halian, 2023; Karpenko & Klympush, 2023; Los et al., 2023); 2) anticipatory (Zavatska et al., 2023); 3) activity-based (Blynova et al., 2019; Kalenchuk et al., 2023; Popovych et al., 2020c; 2021c; 2023c; Strykalenko et al., 2019; 2020) with an educational aspect (Blynova et al., 2022b; Chebykin, 2023; Kobets et al., 2021a; 2021b; Shevchenko et al., 2023); 4) psychophysiological (Cretu et al., 2021; Galan et al., 2020; Kozina et al., 2019; Nosov et al., 2021; Yarmak et al., 2017) with extreme conditions (Kuzikova et al., 2023; Mamenko et al., 2022; Vavryniv & Yaremko, 2022; Zinchenko et al., 2022; 2023). Such articulation of the research subject allowed creating an up-to-date algorithm of empirical research in combination with theoretical substantiation.

*Participants.* The research sample involved juniors representing sports educational institutions of all regions of Ukraine: SSSYOR №1 (Ivano-Frankivsk, Ukraine), KHSPC (Kherson, Ukraine) and LSSCY Enerhetyk" (Lviv, Ukraine). Athletes' age characteristics but not sports achievements were important. The age of the juniors participating in the research ranged from 15 to 19 years ( $M=17.01$ ;  $Me=17.00$ ;  $SD=2.96$ ). The junior athletes represented team sports: football – 24 persons; volleyball – 18 persons; handball – 27 persons and individual sports: track and field – 29 persons; rowing – 6 persons; weightlifting – 6 persons; freestyle wrestling – 14 persons. The total sample included 124 participants. Gender differentiation of the sample was as follows: males ( $n=35$ ; 28.20%) and females ( $n=89$ ; 71.80%). Prize-winners of the World Championships, Ukraine's Championships, winners of international, national and regional tournaments were among the respondents. There were also juniors-beginners who started their career path in sporting activities and amateur athletes who did not plan their professional career but regularly trained and participated in tournaments.

*Organization of Research.* A combined strategy with elements of modelling a situation of empirical research was implemented. Empirical materials from calendar tournaments were collected from September 2022 to June 2023 and were agreed with the specialized sports federations and were considered official. All the tournaments used for collecting empirical data were held in Ukraine under martial law. Such a situation created changed conditions of competitive activity accompanied by additional stressfulness and unpredictability of competition timing (air alerts, athletes' moving from sports grounds to shelters and breaks in matches for an indefinite period). Empirical cross-sectional research was carried out before competitions.

Only the respondents' results, related to the competitions which underwent unpredictable changes, were processed. The respondents' data collected in advance, before a change in the conditions of competitive activity were important for ensuring ecological validity. Purposeful observation was used during tournaments, and planned conversations were arranged on a selective basis and individually, after competitions. The research was organized with assent of the Ethical Committees of the team administrations, in compliance with the principles of confidentiality, awareness and voluntariness declared in the Ethical Standards of Helsinki Declaration (2013).

*Procedures and instruments.* The respondents' empirical data were collected by means of valid psychodiagnostic methods. Participant observation with standard protocols was used for identifying changed conditions of competitive activity. The version of the questionnaire "Zimbardo Time Perspective Inventory" ("ZTPI") (Zimbardo & Gonzalez, 1984) adapted by O. Senyk (2012) was used to find the key dimensions of time decentralizations: Temporal Decentralization Future (TDF); Temporal Decentralization Fatalistic Present (TDFP); Temporal Decentralization Hedonistic Present (TDHP); Temporal Decentralization Positive Past (TDPP); Temporal Decentralization Negative Past (TDNP). The coefficient of homogeneity which allowed for the validity of the subsequent stages of the empirical research ( $\alpha$ -Cronbach) equaled  $\alpha=.844$ . According to the research logic, the dimensions relating to planning and modelling, were most appropriately represented in the method which is a modified version of the questionnaire "Style of Self-regulation of Behavior" ("SSBM") (Morosanova, 2004) tested in sport studies by I. Popovych et al. (2022d). The basic scales of the questionnaire, reflecting relevant measurements of juniors' successful sporting activities, were used: programming, planning, modelling, evaluating achievements, flexibility and independence. The  $\alpha$ -Cronbach coefficient was  $\alpha=.898$ . The obtained measurements of the coefficient of homogeneity of the responses were  $\alpha=.844-.898$ , that is a medium and a high level which meets the modern requirements to empirical data processing.

*Statistical analysis.* Empirical data were processed by means of the program package "SPSS" v. 23.0, the graphical editor "MS Word" and the statistical module "MS Excel". Statistical significance was determined using relevant coefficients: the  $\alpha$ -Cronbach coefficient; Spearman's correlation coefficients ( $r_s$ ); Student's t-test (t). The levels not lower than  $p \leq .050$  were considered statistically significant.

## Results

Tabl. 1 gives the key parameters of descriptive frequency characteristics by the psycho-diagnostic instrument "ZTPI" adapted by O. Senyk (2012).

**Table 1.** Descriptive frequency characteristics by “ZTPI” by adapted O. Senyk (2012) (n=124)

Parameters	min	max	M	Me	SD
“ZTPI” (Zimbardo & Gonzalez, 1984) by adapted O. Senyk (2012)					
TDF	2.61	5.03	4.01	4.00	±.69
TDFP	1.28	2.97	2.08	2.00	±.51
TDHP	2.19	4.31	3.26	3.00	±.48
TDPP	2.42	5.01	3.88	4.00	±.71
TDNP	1.93	4.12	2.43	2.50	±.59

Note: min – the minimum of distribution; max – the maximum of distribution; M – arithmetic mean of distribution; Me – the median (*in italics*); SD – mean-square deviation of distribution; TDF – Temporal Decentralization Future; TDFP – Temporal Decentralization Fatalistic Present; TDHP – Temporal Decentralization Hedonistic Present; TDPP – Temporal Decentralization Positive Past; TDNP – Temporal Decentralization Negative Past.

Comparison of the descriptive frequency characteristics with the norms of the adapted method (Senyk, 2012) and the results of research on similar junior samples (Bilous & Okhrimenko, 2015) and a sports sample (Popovych et al., 2022b) did not show significant differences. There are tendencies oriented towards an increase in the following parameters: TDF (M = 4.01; Me = 4.00; SD = ±.69) and TDFP (M = 2.08; Me = 2.00; SD = ±.51). We argue that the obtained data are within the test norm and the norm of data which are the result of testing relevant samples. Tabl. 2 gives the key parameters of the descriptive frequency characteristics by the questionnaire “SSBM” (Morosanova, 2004) modified by I. Popovych et al. (2022d).

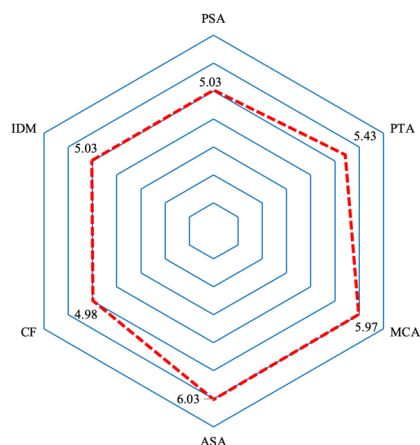
**Table 2.** Descriptive frequency characteristics by the questionnaire “SSBM” (Morosanova, 2004) modified by I. Popovych et al. (2022d) (n=124)

Parameters	min	max	M	Me	SD
“SSBM” (Morosanova, 2004) modified by I. Popovych et al. (2022d)					
PSA	2.0	9.0	5.03	5.00	±1.91
PTA	3.0	8.0	5.43	5.50	±1.98
MCA	3.0	8.0	5.97	6.00	±2.56
ASA	2.0	9.0	6.03	6.00	±2.45
CF	1.0	7.0	4.98	5.00	±1.78
IDM	2.0	9.0	5.03	5.00	±2.06

Note: min – the minimum of distribution; max – the maximum of distribution; M – arithmetic mean of distribution; Me – the median (*in italics*); SD – mean-square deviation of distribution; PSA – Programming Sporting Activities; PTA – Planning Training Activities; MCA – Modelling Competitive Activities; ASA – Achievements of Sporting Activities; CF – Cognitive Flexibility; IDM – Independence in Decision-Making.

The obtained descriptive frequency characteristics were compared with the results of the modified form of the questionnaire (Popovych et al., 2022d), with standard indexes (Morosanova, 2004) and with the data of a junior sample (Blynova et al., 2022a). It was found that there were no statistically significant differences. Attention was focused on insignificant manifestations of the tendency in the parameters of self-regulation styles of the juniors’ behavior.

The structure of a self-regulation style which is important in the context of the research on self-regulation parameters, is graphically visualized and given in Fig. 1.



Note: PSA – Programming Sporting Activities; PTA – Planning Training Activities; MCA – Modelling Competitive Activities; ASA – Achievements of Sporting Activities; CF – Cognitive Flexibility; IDM – Independence in Decision-Making.

**Figure 1.** The structure of a self-regulation style of the juniors’ behavior

The structure is created through the parameter of arithmetic mean of distribution ( $M$ ), which is more sensitive than the median ( $Me$ ). The given structure visualizes remoteness of the empirical measurements from the diagram center, that indicates well-developed self-regulation parameters in the research participants. The more area is outlined in red, the higher self-regulation ability the respondents have. The following maximum values were registered: MCA ( $M = 5.97$ ;  $Me = 6.00$ ;  $SD = \pm 2.56$ ) and ASA ( $M = 6.03$ ;  $Me = 6.00$ ;  $SD = \pm 2.45$ ).

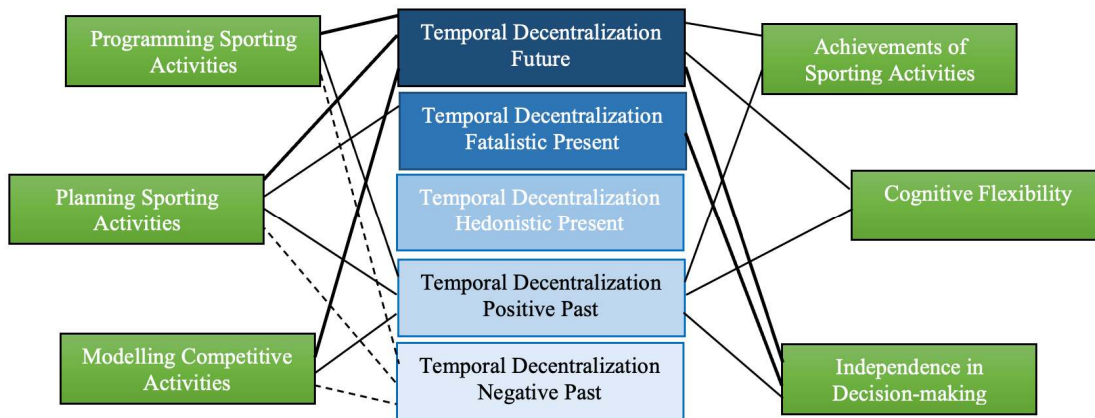
Tabl. 3 presents a matrix of correlations between the self-regulation parameters of behavior and the types of the juniors' time decentrations.

**Table 3.** Matriz of correlations between self-regulation parameters and the types of time decentrations (n=124)

Scale	TDF	TDFP	TDHP	TDPP	TDNP
PSA	.311**	.085	-.046	.111*	-.114*
PTA	.267**	.111*	.074	.123*	-.110*
MCA	.284**	-.034	.012	.121*	-.118*
ASA	.143*	.079	.054	.113*	.035
CF	.122*	-.030	.055	.119*	-.087
IDM	.302**	.221**	.089	.169*	-.068

Note: TDF – Temporal Decentralization Future; TDFP – Temporal Decentralization Fatalistic Present; TDHP – Temporal Decentralization Hedonistic Present; TDPP – Temporal Decentralization Positive Past; TDNP – Temporal Decentralization Negative Past; PSA – Programming Sporting Activities; PTA – Planning Training Activities; MCA – Modelling Competitive Activities; ASA – Achievements of Sporting Activities; CF – Cognitive Flexibility; IDM – Independence in Decision-Making; \* –  $p < .050$ ; \*\* –  $p < .010$ .

In order to visualize correlations, the pleiade of self-regulation parameters with the types of junior athletes' time decentration was created (Fig. II).



Note: - - - - negative correlations at  $p \leq .010$ ; - - - - negative correlations at  $p \leq .050$ ; positive correlations at  $p \leq .050$ ; - - - - positive correlations at  $p \leq .010$ .

**Figure II.** Correlation pleiade of content parameters of time perspective and the junior athletes' motives for sporting activities (n=124)

In the correlation matrix (see Tabl. 3) and the correlation pleiade (see Fig. II) there are seventeen statistically significant correlations. The time decentrations TDF and TDPP have the largest number of correlations ( $p \leq .050$ ;  $p \leq .010$ ) – six per each one. There is not any statistically significant correlation of TDHP with self-regulation parameters, whereas TDNP and TDFP have three and two correlations, respectively. Since TDF has three correlations ( $p \leq .010$ ) and TDPP does not have such correlations, we hold an opinion that Temporal Decentralization Future is the most important in junior athletes' sporting activities and is the most dependent time decentration along with Temporal Decentralization Positive Past. All the self-regulation parameters have statistically significant correlations with time decentrations ( $p \leq .050$ ;  $p \leq .010$ ). The largest number of correlations was registered in the parameter PTA – four ( $p \leq .050$ ), at the same time Independence in Decision-Making has the largest number of correlations at the level  $p \leq .010$ . Thus, Planning Training Activities and Independence in Decision-Making are the most important and the most dependent self-regulation parameters of the junior athletes.

In order to find statistically significant differences between self-regulation parameters of the respondents of an optimal profile and those of a general profile of time decentration, the participants were divided into two groups. Group I involved the participants with a general profile of time decentration and Group II involved the respondents with an optimal profile of time decentration. The respondents of Group II were selected by the

following measurements: a high level of Temporal Decentralization Positive Past; the level of Temporal Decentralization higher than the medium; a medium level of Temporal Decentralization Hedonistic Present and low levels of Temporal Decentralization Fatalistic Present and Temporal Decentralization Negative Past. Group I consisted of n=86 respondents and Group II consisted of n=38. Tabl. 4 gives self-regulation parameters used to find statistically significant differences by Student's t-test between Group I and Group II.

**Table 4.** Statistically significant differences between Group I and Group II

Parameters	M <sub>1</sub>	M <sub>2</sub>	Student's t-test	Level of significance
	Group I (n <sub>1</sub> =86)	Group II (n <sub>2</sub> =38)		
PSA	5.34	6.23	t=1.09	-
PTA	4.12	7.04	t=3.21	p ≤ .010
MCA	4.15	6.34	t=2.12	p ≤ .050
ASA	4.45	6.67	t=1.45	-
CF	4.01	5.45	t=1.03	-
IDM	4.98	7.14	t=3.08	p ≤ .010

Note: M<sub>1</sub> – arithmetic mean Group I; M<sub>2</sub> – arithmetic mean Group II; Group I – junior athletes with a general profile of time decentration; Group II – junior athletes with an optimal profile of time decentration; PSA – Programming Sporting Activities; PTA – Planning Training Activities; MCA – Modelling Competitive Activities; ASA – Achievements of Sporting Activities; CF – Cognitive Flexibility; IDM – Independence in Decision-Making.

There are statistically significant differences between Group I and Group II in three self-regulation parameters: PTA (t = 3.21; p ≤ .010), MCA t = 2.12; p ≤ .050) and IDM (t = 3.08; p ≤ .010). Thus, the junior athletes with an optimal profile of time decentrations have a statistically significant advantage in planning and modelling sporting activities and independent decision-making. These parameters are crucial for achieving a victory result. No differences were registered in programming sporting activities, achievements and cognitive flexibility.

## Discussion

In scientific sports literature there are up-to-date empirical studies revealing the place and role of temporality in training process (Popovych et al., 2023a), regulating tempo and rhythm of elite athletes' training (Menting et al., 2019). There is a lack of research examining time decentrations and statistically confirming their correlation with self-regulation parameters under difficult conditions.

We assume that changed conditions of competitive activity can activate neuro-psyhic and physiological mechanisms of a junior's body, launch processes of self-maintenance and achievement of a desirable result before construction of a model of a victory result. Such articulation of the investigated issue is reflected in the studies by A. Shaboltas (2004) and M. Boryshevskiy (2012). Temporal Decentralization Future activates the principle "only victory, everything for the sake of winning", therefore (see Tabl. 3 and Fig. II) TDF is one of the crucial decentrations in our empirical cross-section. The second important time decentration is Temporal Decentralization Positive Past, which, obviously, activates the principle "here and now and nobody except us". These statements were taken from the protocol forms of the planned conversations with the participants of competitions. Since these statements were used repeatedly, we assume that they could have been articulated by the coaching staff as a mindset of the game or during a break in the game or during a break between halves/attempts. Constructing a model of the expected image is a powerful factor of realizing a plan, that is confirmed in the study by I. Popovych et al. (2019a). It is obvious that the process of modelling involves all the junior athletes' spheres: cognitive, emotional and behavioral. A high level of junior athletes' operational ability to design and construct a clear model of the expected future can lead to a victory result or be a catalyst of a game loss in case of negative projections. The strongest correlation was registered (see Tabl. 3) in the dimension "Planning Training Activities" (r<sub>s</sub>=.311; p≤.010) with Temporal Decentralization Future. We can explain that this correlation in combination with the two other strong correlations of the dimension "Independence in decision-Making" – TDF (r<sub>s</sub>=.302; p≤.010) and TDPP (r<sub>s</sub>=.221; p≤.010) – constitutes an efficient self-regulating construct supported by the determinants of adolescent psychology. A high level of independence requires a responsible attitude towards the activities performed (Zarichanskyi et al., 2023). Obviously, planned training process and high-quality education comprise that fundamental dimension which is activated under changed conditions of competitive activity. Changed conditions are regarded as an additional negative factor which is stressogenic and deprives an athlete of their psycho-emotional resources. Respondents' imagination brings them the images created in training and educational process, which are capable of inspiring and building confidence in achievement of a desirable result. Under such conditions, "Planning Training Activities" and "Independence in Decision-Making" play a role of a self-regulating construct. The area outlined in red (see Fig. I) is also an argument for this statement. Junior athletes who are able to coherently and monotonously realize the coach's game plan and implement a tactical strategy are considered team players and regarded as individuals who do not lose self-control in stressful situations. Self-control is an important component of a junior athlete's self-

regulation. We should pay attention to the parameter “Achievements in Sporting Activities” (see Tabl. 3) which, expectedly, has statistically significant correlations with TDF ( $r_s=.143$ ;  $p\leq.050$ ) and TDPP ( $r_s=.113$ ;  $p\leq.050$ ). At the same time, no statistically significant difference was registered by this parameter in Group I and Group II (see Tabl. 4). It can indicate that achievement of a victory result in adolescence is affected by the factors which are not determined by means of our instruments. It can concern individual-typological and anthropometric characteristics, but this feature is largely observed in the representatives of individual sports. Obviously, further it is necessary to divide the sample into individual and team sports and compare their parameters. We argue that a statistically significant advantage of Group II over Group I (see Tabl. 4) in the parameters “PTA” and “MCA” confirms the obtained statistically significant correlations given in the correlation pleiade (see Fig. II).

We achieved the purpose and confirmed two hypotheses. We can generalize that the dominant time decentrations have a statistically significant correlation with the junior athletes’ self-regulation parameters. There are seventeen statistically significant correlations ( $p\leq.050$ ;  $p\leq.010$ ). Significant differences between the self-regulation parameters of the respondents of an optimal profile (Group II) and a general profile (Group I) of time decentration ( $p\leq.050$ ;  $p\leq.010$ ) were found.

### Conclusions

1. The study substantiates that junior athletes’ dominant time prospects under changed conditions of competitive activity are time decentrations, and external impacts affecting organization and spatio-temporal coordinates of competitions (time, location, the size of a sports ground, a competition formula, competition duration, a change in the number of predicted breaks and forced breaks) are changed conditions of competitive activity.

2. Remoteness of the empirical measurements from the center in the graphical structure of self-regulation of the juniors’ behavior indicates well-developed self-regulation, and the area outlined in red demonstrates the respondents’ self-regulation ability.

3. The use of Spearman’s correlation coefficients ( $r_s$ ) allowed establishing seventeen statistically significant correlations ( $p\leq.050$ ;  $p\leq.010$ ). It was emphasized that Temporal Decentralization Future (TDF) and Temporal Decentralization Positive Past (TDPP) have the largest number of correlations – six per each one.

4. Comparison of the self-regulation parameters of the respondents with an optimal profile (Group II) and a general profile (Group I) of time decentrations was performed. Statistically significant differences ( $p\leq.050$ ;  $p\leq.010$ ) were found by three self-regulation parameters: “Planning Training Activities”, “Modelling Competitive Activities” and “Independence in Decision-Making”.

5. It was explained that the strongest correlation of the dimension “Planning Training Activities” ( $r_s=.311$ ;  $p\leq.010$ ) with Temporal Decentralization Future in combination with the other two stronger correlations of the dimension “Independence in Decision-Making”: TDF ( $r_s=.302$ ;  $p\leq.010$ ) and TDPP ( $r_s=.221$ ;  $p\leq.010$ ), constitutes an efficient self-regulating construct of achieving a victory result under changed conditions of sporting activities.

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