

Anxiety as a multifaceted phenomenon within the motivational orientation of junior athletes

IHOR POPOVYCH¹, IRYNA RODCHENKOVA², MYKOLA LUKJANCHENKO³, YAROSLAVA YURKIV⁴,
RUSLANA BILOUS⁵, NATALIYA SHEVCHENKO⁶, IHOR HOIAN⁷

¹Kherson State University, Kherson, UKRAINE

¹Mykola Yarmachenko Institute of Special Pedagogy and Psychology, NAPS of Ukraine, Kyiv, UKRAINE

²Volodymyr Dahl East Ukrainian National University, Kyiv, UKRAINE

³Drohobych Ivan Franko State Pedagogical University, Drohobych, UKRAINE

⁴Taras Shevchenko Luhansk National University, Poltava, UKRAINE

⁵Kremenchuk Mykhailo Ostrohradskyi National University, Kremenchuk, UKRAINE

⁶Zaporizhzhia National University, Zaporizhzhia, UKRAINE

⁷Vasyl Stefanyk Precarpathian National University, Ivano-Frankivsk, UKRAINE

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Abstract:

The objective is to empirically investigate statistically significant correlations and elucidate determinants of high and low anxiety parameters within the motivational orientation dimensions of junior athletes. The study encompassed male and female junior athletes (n = 96) (Me = 17; M = 17.38; SD = ±1.71) representing individual sports from sports schools for children and young people – “SSSYOR №1” in Ivano-Frankivsk, Ukraine and “LSSCY Enerhetyk” in Lviv, Ukraine – and youth academies of professional handball clubs: “HC Dniprianka” in Kherson, Ukraine and “HC Real” in Mykolaiv, Ukraine and football club “FC Enerhiya” in Lviv, Ukraine.

Methods: valid and reliable methods were applied to find the parameters of anxiety and motivational orientation of the respondents before the beginning of the game. Additionally, a planned observation with standard blanks was used. Statistical coefficients were used to establish significant correlations. **Results.** It was found that the junior athletes with a low level (Group 1) of the parameters of anxiety have an advantage in the level of motivation over the athletes with a high level (Group 2). A lack of advantage in the parameters of situational and personal social protection – SSP (U = 623.50; p = .549) and PSP (U = 532.00; p = .091) – was explained by an equally important impact of this protection for the respondents with a high level and those with a low level. It was proved that high and low psychological content parameter of anxiety have statistically significant correlations with the respondents’ motivational orientation: Group 1 – thirty correlations; Group 2 – twenty-seven correlations. It was empirically established that situational (SAEP) and personal (PAEP) anxious evaluation of prospects has a positive impact on subject-directed (SbM) and socially-directed (ScM) motivational orientation in the two research groups. **Discussion and conclusions.** It was substantiated that the impact of the parameters of SAEP and PAEP are within the scope of a personal choice, social pressure and an athlete’s construction of the future that requires psychological assistance and support of coaching and teaching staff. It was highlighted that the impact of spectators, social pressure of mass-media, expectations of fans, coaching staff and management of an organization (sports school/professional club) and junior athletes’ aspirations to meet other peoples’ expectations are wrong tactics and strategies of training and competitive process. We can generalize that anxiety is a multifaceted phenomenon in the dimensions of motivational orientation of junior athletes combining a complex of internal and external factors determining psychophysiological reactions of a junior athlete’s body and their motivational orientation. We recommend that the obtained results should be taken into consideration by coaches working with juniors.

Key words: mental health, adolescence, competitiveness, competition, self-actualization, identity, social pressure.

Introduction

Successful sporting activities of junior athletes depend on a complex of factors: physical, tactical-technical, functional and rehabilitative work. All these constituents are closely connected with psychological readiness of an athlete. An athlete’s psychological readiness is a combination of their dominant mental states and characteristics in educational, training and competitive activities (Popovych et al., 2022b; 2022h; Prokhorenko et al., 2023; Prokhorenko, 2022). It was found and substantiated that a subject’s functional state affects successfulness of their activity (Kozin et al., 2022; 2023). One of the key characteristics which can determine success of a performance, a team’s victory, distribution of rewards at the Olympic games and even maintenance of fitness shape and avoidance of traumas is anxiety. The sources of anxiety can be external and internal,

personal and social, have reactive and situational contents. External sources include not only competitors, competitors' fans, pressure of mass-media, but also support and fans of athletes expecting only successes and victories. Internal sources involve physical and tactical unreadiness, psychological diffidence, traumatic experiences, aspirations to meet other people's expectations. There are much more factors causing anxiety, which allow stating that anxiety is a multifaceted phenomenon. Our task is to establish statistically significant correlations and differences in this combination of causal relationships and substantiate them. A high level of anxiety causes stresses and has a negative effect on health (Selye, 1976; Tsybuliak et al., 2023). Even permanent stressful situations resulting in a favorable scenario, i.e. eustress, exhaust an athlete and increase injury rates (Tavrovetska et al., 2023). An optimal state of fighting (competitive) activity by A. Alekseev (2006) is an explanation of psychological readiness and ability to cope with external and internal sources of anxiety. Junior athletes just gain experience, improve their mastery and develop skills to manage optimal mental states in sporting activities. A number of studies on dominant mental states conducted by research teams of I. Popovych et al. (2019a; 2019b; 2023a; 2023d) within the framework of initiative and grant projects demonstrate that a victory result directly depends on self-command, self-control, reflection and individual-typological characteristics of subjects of competitive activity (Popovych et al., 2023b).

Changed conditions of competitive activities performed by athletes can have a crucial impact on the game or destroy the game plan. They are a powerful stressogenic factor which can be a test for stress resistance (Popovych et al., 2022g; Shcherbak et al., 2023), resilience (Popovych et al., 2022f), motivational orientation (Blynova et al., 2022b; Popovych et al., 2023e) and expectation of a victory (Popovych et al., 2023c) of participants of competitive process. Sometimes complaints of coaching staff and athletes against organizers are reasonable, but both teams or all participants usually are in identical conditions. Even those athletes who qualify for a higher rank also have equal loads, but, in comparison with other qualifications, such participation can take too many efforts that will affect long-term prospects. It is characteristic of track and field, tennis, wrestling and gymnastics. At the same time, some athletes can be ready for such loads, whereas they are fatal for others. It is important not to forget about a strategic component and a long distance in competitions of team or individual sports. Sometimes several nervous, tough and scandalous competitions can take many resources that can affect further competitions. Anxiety plays an important role in all these competition manifestations. We assume that low levels as well as high levels and a sufficient level of rigidity are not capable of providing junior athletes with appropriate functional readiness and ability to manage their optimal competitive states. The risk of traumas can be hidden in low levels of anxiety. Junior athletes demonstrating advantages in resources and force are not able to focus on tactical and strategic components of competition process. Due to complicated and changed conditions of competitions, athletes may not only experience physical injuries, but also mental traumas (Avramchuk et al., 2023; Hasiuk et al., 2023; Kuzikova et al., 2023).

Anxiety should not be underrated. It is called "a central problem of the present civilization" (Stavytska, 2013). In her retrospective analysis of the phenomenon of anxiety, the researcher regards this problem as "a life experience of the present". The phenomenon of anxiety is a research subject not only in psychology, but also in psychiatry, rehabilitation, biochemistry, physiology, philosophy and sociology (Stavytska, 2013). Diversity of the phenomenon of anxiety is characterized: quantitatively (the level of manifestation intensity: low, moderate and high); qualitatively (types: gnostic, affective and behavioral) and in terms of content by determinants: situational and personal (Striletska, 2016). In early adolescence, anxiety is partially diagnosed as an individual personality trait which is dominant in the structure of psyche (Yastochkina, 2011). Therefore, in late adolescence, there is a developed and determined complex of personal characteristics which can lead to fast success and victories in junior sports and, at the same time, it can be a reason for failures or long-term exhausting training aimed at overcoming stillness or regress (Halian et al., 2023a; 2023b; Kurova et al., 2023; Popovych & Blynova, 2019).

Anxiety as a multifaceted phenomenon in the dimensions of motivational orientation of junior athletes is considered to be an effect of internal and external factors determining psychophysiological reactions of a junior athlete's body and their motivational orientation.

Hypothesis. We assume that 1) respondents with a low level of the parameters of anxiety have an advantage in the level of motivation over athletes with a high level; 2) high and low psychological content parameters of anxiety will have a statistically significant correlation with the respondents' motivational orientation.

Aim. To conduct empirical research on statistically significant correlations and substantiate the determinants of the parameters of high and low anxiety in the dimensions of motivational orientation of junior athletes.

Methods

Methodology. Methodological fundamentals of the research on anxiety as a multifaceted phenomenon in the dimensions of motivational orientation comprise the concepts of interdependence of anxiety and motor behavior C. Spielberger (1971), the impact of stress, eustress and distress on human health and illnesses (Selye, 1976) and a multi-level nature of anxiety (Stavytska, 2013; Yastochkina, 2011). Motivational orientation of junior athletes is regarded as a resultant component of sporting activities which always has a goal and is aimed at a victory (Smoldovskaya, 2022).

For developing an empirical research strategy, we considered the following contemporary studies investigating: anxiety and safety of workspace in different activities (Kalenchuk et al., 2023; Nosov et al., 2021); Solovey et al., 2020); functional states of sporting activities (Cretu et al., 2021; Strykalenko et al., 2019; Popovych et al., 2023f); changed conditions of sporting activities (Hubeladze, 2021; Hudimova et al., 2021); difficult conditions of professional activity (Andrushko, 2023; Blynova et al., 2022a; Zarichanskyi et al., 2023); age and value-based determinants of adolescence (Hulias & Hoian, 2022; Marchuk et al., 2023; Okhrimenko et al., 2023); regularities of educational and professional growth of an individual (Bokhonkova et al., 2023; Chaikovska et al., 2023; Kobets et al., 2021; Los et al., 2023; Shevchenko et al., 2023) and other experimental studies using advanced research methods in different areas of human activity (Suchikova & Tsybuliak, 2023; Suchikova et al., 2023; Zinchenko et al., 2022; 2023a; 2023b).

Participants. The research involved male and female junior athletes (n=96) (Me=17; M=17.38; SD=±1.71) representing individual sports from sports schools for children and young people – “SSSYOR №1” in Ivano-Frankivsk, Ukraine and “LSSCY Enerhetyk” in Lviv, Ukraine – and youth academies of professional handball clubs: “HC Dniproanka” in Kherson, Ukraine and “HC Real” in Mykolaiv, Ukraine and football club “FC Enerhiya” in Lviv, Ukraine. The representative sample objectively reflected the research population. The research involved equal numbers of respondents by gender differentiation: female junior athletes (n=48; 50.0%) and male junior athletes (n=48; 50.0%).

Procedures and instruments. The selected psycho-diagnostic instruments complied with the requirements of empirical sports studies and possessed satisfactory parameters of validity and reliability. Dependent variables were found by means of two methods. The content dimensions of anxiety by situational and personal determinants were of special scientific interest. Questionnaire of C. Spielberger (1971) “State-trait anxiety inventory” (STAI) was used to determine the levels of situational reactive anxiety (SRA) and personal anxiety (PA). The other method which allowed differentiating situational and personal anxiety and reflecting the research subject thoroughly is a test method “Integrated Anxiety Test” (IAT) edited by A. Bizyuk, L. Wasserman and B. Iovlev (2014). The method allowed differentiating situational anxiety by the following parameters: the indicator of general situational anxiety (IGSA), situational emotional discomfort (SED), situational asthenic component (SAC), situational phobic component (SPC), situational anxious evaluation of prospects (SAEP) and situational social protection (SSP). Differentiation of personal anxiety by the parameters is as follows: the indicator of general personal anxiety (IGPA), personal emotional discomfort (PED), personal asthenic component (PAC), personal phobic component (PPC), personal anxious evaluation of prospects (PAEP) and personal social protection (PSP). The coefficient of homogeneity α -Cronbach of the responses, determined jointly by the methods and individually by situational and personal anxieties was $\alpha=.789-.913$ (medium and high levels).

Another method tested in sports studies which allowed qualitatively differentiating motivational orientation of junior athletes is the questionnaire “Athlete’s Motivational Orientation” (AMO) (Smoldovskaya, 2022). Division of motivational orientation into constituents – subject-directed (SbM), result-directed (RsM), socially-directed (ScM) and personally-directed (PrM) – qualitatively characterized the independent research value. The obtained level of α -Cronbach equaled $\alpha=.711$, that meets the requirements for applying the obtained data in experimental research.

Organization of Research. For the first time, a summative research strategy with elements of comparison of correlations of the parameters of the dependent variable was applied. As a rule, strategies do not involve comparing correlations. The parameters and differences were compared by gender differentiation, kinds of sports, levels of manifestation etc. The proposed study of differences in the dimensions of correlations of the investigated groups, distributed by the mean squared deviation (SD) allowed establishing and measuring quantitative dependence of the parameters of different levels. The obtained results were substantiated and significant differences were explained at the final stage of the research. We selected equal numbers of the research participants by gender differentiation in order to avoid the impact of the advantage of indicators by gender on the final result. Participants representing different sports and different qualifications were selected to appropriately reflect the research population of junior athletes. Empirical data were collected in 2022–2023 and covered data from two educational-training and competition seasons. Purposeful observation with entering data in standard protocols was used. We gathered n=24 protocols which marked indicators of situational and personal anxiety before and during competitions. Confidentiality of the research was maintained. The participants were informed about the empirical cross-section and observation in advance. Participation of all the respondents was voluntary. A consent to conduct the research was given by the administration of the sports schools for children and young people and youth academies of professional clubs.

Statistical Analysis. The main statistical calculations were performed using the computer application “IBM SPSS Statistics” version 29.0.0.0 (241). “MS Excel” was used for the current data and for testing the working hypothesis. “MS Word” was used for graphical representation. The coefficients used to establish statistical significance of the empirical research: α -Cronbach, Spearman correlation coefficients (rs), coefficients (U) Mann-Whitney. The levels, differences and correlations of $p\leq.050$ and $p\leq.010$ were considered statistically significant.

Results

Descriptive frequency characteristics of all the parameters of anxiety which became dependent variables were determined by the following methods: “State-trait anxiety inventory” (Spielberger, 1971) and “Integrated anxiety test” (Bizyuk et al., 2014). Tabl. 1 gives the key descriptive frequency characteristics of the parameters of the athletes’ anxiety.

Table 1. Dependent variables of anxiety of the junior athletes (n=96)

Statistics	Dependent variables													
	SRA	SRA	IGSA	SED	SAC	SPC	SAEP	SSP	IGPA	PED	PAC	PPC	PAEP	PSP
Men (M)	37.04	37.94	7.22	62.44	95.12	42.98	110.12	85.12	10.93	127.26	125.09	72.35	163.56	112.08
Median (Me)	37.00	38.00	7.00	62.50	95.00	43.00	110.00	85.00	11.00	127.00	125.00	72.00	163.56	112.00
Mode (Mo)	36.00	37.00	6.00	43.00	93.00	35.00	106.00	81.00	9.00	113.00	109.00	64.00	158.00	104.00
Squared deviation (SD)	2.43	2.81	1.23	11.34	17.34	6.98	19.34	15.32	1.92	20.19	19.21	11.83	28.44	17.06
Minimum (min)	30.00	30.00	3.00	12.00	23.00	10.00	44.00	23.00	8.00	41.00	39.00	27.00	80.00	62.00
Maximum (max)	42.00	43.00	10.00	95.00	142.00	77.00	161.00	120.12	13.00	179.00	165.00	98.00	181.00	148.12

Note: SRA – situational reactive anxiety; PA – personal anxiety; IGSA – indicator of general situational anxiety; SED – situational emotional discomfort; SAC – situational asthenic component; SPC – situational phobic component; SAEP – situational anxious evaluation of prospects; SSP – situational social protection; IGPA – indicator of general personal anxiety; PED – personal emotional discomfort; PAC – personal asthenic component; PPC – personal phobic component; PAEP – personal anxious evaluation of prospects; PSP – personal social protection.

There are no statistically significant differences between the obtained empirical results by the parameters of the method “STAI” (Spielberger, 1971) and those obtained in other sports samples: handball referees (Popovych et al., 2022e; 2023b) and the sample of adult athletes (Shcherbak et al., 2023). We can observe positive anxiety tendencies towards an increase in the values of situational and personal anxieties in the sample of junior athletes. By the parameters of the method “IAT” (Bizyuk et al., 2014), in comparison with the empirical data of the sports sample (Statsenko et al., 2018), there are no statistically significant differences, however, there is a higher modality of the parameters of anxiety in the sample of junior athletes. In comparison with the data of non-athletes (Lapin & Belyaeva, 2019), statistically significant differences of the prevailing number of the parameters of anxiety were registered in students from other cities who entered higher educational institution and started their professional development. We can state that the obtained empirical data relevantly reflect the dependent variables and do not contradict the data obtained by other researchers.

Tabl. 2 gives the key descriptive frequency characteristics of the independent variables measured by the method “AMO” (Smoldovskaya, 2022).

Table 2. Independent variables of motivational orientation of the junior athletes (n=96)

Statistics	Independent variables			
	SbM	RsM	ScM	PrM
Men (M)	7.93	8.11	9.59	8.32
Median (Me)	8.00	8.00	10.50	8.50
Mode (Mo)	9.00	7.00	9.00	7.00
Squared deviation (SD)	1.38	1.42	1.72	1.59
Minimum (min)	5.00	5.00	7.00	5.00
Maximum (max)	10.00	10.00	12.00	10.00

Note: SbM – subject-directed motivational orientation; RsM – result-directed motivational orientation; ScM – socially-directed motivational orientation; PrM – personally-directed motivational orientation.

The obtained empirical data, in comparison with the normative parameters, recommended by the author of the method I. Smoldovskaya (2022) and the data obtained in other sports samples (Blynova et al., 2022b; Popovych et al., 2023e), do not have statistically significant differences.

The sample was divided by the levels of manifestation of the parameters of anxiety by SD – the mean squared deviation. There were three levels: high, medium and low. Group 1 (n=23; 23.96%) involved the respondents with low levels of the parameters, Group 2 (n=29; 30.21%) – the respondents with high levels of the parameters. Medium levels and mixed data, i. e. combination of two or three levels were not considered. Statistical significance of differences between Group 1 and Group 2 was established by means of the coefficients (U) Mann-Whitney (Tabl. 3) in order to retest.

Table 3. Differences between Group 1 and Group 2 with a low level and a high level of anxiety

Mann-Whitney (U)	Dependent variables													
	SRA	SRA	IGSA	SED	SAC	SPC	SAEP	SSP	IGPA	PED	PAC	PPC	PAEP	PSP
U	212.00	128.00	216.00	162.50	158.50	148.00	<i>513.00</i>	623.50	132.00	182.50	210.50	134.00	<i>488.00</i>	532.00
p	.000	.000	.000	.000	.000	.000	.033	.549	.000	.000	.000	.000	.027	.091

Note: SRA – situational reactive anxiety; PA – personal anxiety; IGSA – indicator of general situational anxiety; SED – situational emotional discomfort; SAC – situational asthenic component; SPC – situational phobic component; SAEP – situational anxious evaluation of prospects; SSP – situational social protection; IGPA – indicator of general personal anxiety; PED – personal emotional discomfort; PAC – personal asthenic component; PPC – personal phobic component; PAEP – personal anxious evaluation of prospects; PSP – personal social protection; level of significance given in **bold type** – $p < .010$; level of significance given in *italics type* – $p < .050$.

Majority of statistically significant differences in the compared pairs of Group 1 and Group 2 were expectedly obtained. The prevailing number ($n=8$) of comparisons is at the level $p < .010$. There are two correlations at the level $p < .050$ between low and high levels of the parameters of situational ($U=513.00$; $p=.033$) and personal ($U=488.00$; $p=.027$) anxious evaluation of prospects. No statistically significant correlations were registered in two dimensions of situational and personal social protection: ($U=623.50$; $p=.549$) and ($U=532.00$; $p=.091$).

According to our research strategy, Spearman correlation coefficients (r_s) were individually found by two distributions. Tabl. 4 gives a correlation matrix of low levels of anxiety (Group 1) and the parameters of the junior athletes' motivational orientation.

Table 4. Correlation matrix of the investigated parameters in Group 1

Parameters	Coefficients Spearman	Independent variables			
		SbM	RsM	ScM	PrM
SRA	r	.845**	.432**	.075	.138
	p	.000	.000	.565	.232
PA	r	.741**	.312*	.068	-.084
	p	.000	.032	.532	.623
IGSA	r	.801**	.421**	.094	.142
	p	.000	.000	.398	.221
SED	r	.078	-.121	.088	.412**
	p	.554	.283	.565	.002
SAC	r	.076	.389**	.312*	.388**
	p	.568	.009	.032	.009
SPC	r	.066	.406**	.289*	.434*
	p	.538	.005	.042	.001
SAEP	r	.398**	-.444**	.398**	-.848**
	p	.008	.000	.008	.000
SSP	r	.077	.078	-.121	.075
	p	.558	.554	.283	.569
IGPA	r	.685**	.323*	.055	-.104
	p	.000	.032	.548	.465
PED	r	.022	-.111	.076	-.445**
	p	.754	.304	.567	.000
PAC	r	.074	-.377*	-.310*	-.398**
	p	.562	.011	.031	.006
PPC	r	.055	-.434**	-.265*	-.439*
	p	.601	.003	.047	.000
PAEP	r	.402**	-.443**	.388**	-.862**
	p	.009	.001	.008	.000
PSP	r	.075	.044	-.134	.054
	p	.569	.754	.301	.534

Note: SRA – situational reactive anxiety; PA – personal anxiety; IGSA – indicator of general situational anxiety; SED – situational emotional discomfort; SAC – situational asthenic component; SPC – situational phobic component; SAEP – situational anxious evaluation of prospects; SSP – situational social protection; IGPA – indicator of general personal anxiety; PED – personal emotional discomfort; PAC – personal asthenic component; PPC – personal phobic component; PAEP – personal anxious evaluation of prospects; PSP – personal social protection; SbM – subject-directed motivational orientation; RsM – result-directed motivational orientation; ScM – socially-directed motivational orientation; PrM – personally-directed motivational orientation; * – $p < .050$; ** – $p < .010$.

By the parameters of motivational orientation, we established the following number of statistically significant correlations in Group 1: SbM – six; RsM – ten; ScM – six; PrM – eight. Obviously, result-directed motivational orientation of the junior athletes with low levels of the parameters of anxiety is the most dependent one which puts pressure on a junior athlete.

According to our research strategy, Spearman correlation coefficients (rs) were individually found by two distributions. Tabl. 5 gives a correlation matrix of high levels of anxiety (Group 2) and the parameters of the junior athletes' motivational orientation.

Table 5. Correlation matrix of the investigated parameters in Group 2

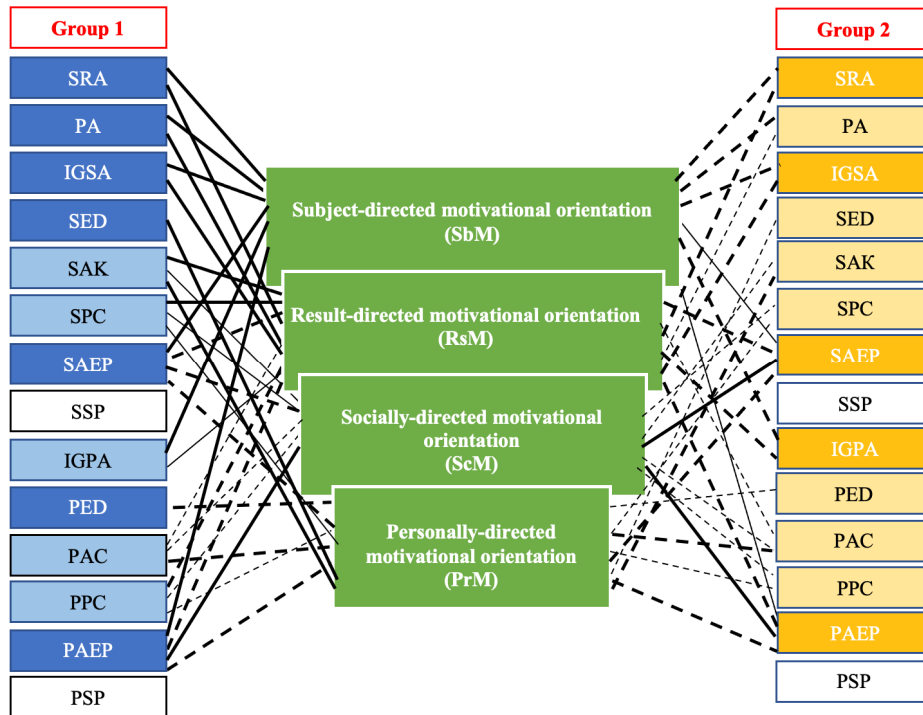
Parameters	Coefficients Spearman	Independent variables			
		SbM	RsM	ScM	PrM
SRA	r	-.623**	-.430**	.063	-.129
	p	.000	.000	.612	.245
PA	r	-.632**	-.237*	.051	-.065
	p	.000	.045	.659	.612
IGSA	r	-.634**	-.445**	.112	-.131
	p	.000	.000	.249	.243
SED	r	.073	-.119	.101	-.236*
	p	.551	.292	.478	.046
SAC	r	.076	-.229	-.377*	-.344**
	p	.568	.055	.011	.012
SPC	r	.011	-.228	-.237*	-.401*
	p	.856	.064	.045	.012
SAEP	r	.237*	-.674**	.356**	-.812**
	p	.047	.000	.009	.000
SSP	r	.056	.057	.123	.079
	p	.678	.682	.281	.554
IGPA	r	-.601**	-.339**	.099	-.079
	p	.000	.008	.434	.512
PED	r	.072	-.121	.098	-.237*
	p	.550	.293	.498	.046
PAC	r	.075	-.221*	-.378*	-.373**
	p	.571	.061	.010	.011
PPC	r	.010	-.223	-.287*	-.412*
	p	.861	.054	.041	.011
PAEP	r	.239*	-.801**	.365**	-.783**
	p	.046	.000	.009	.000
PSP	r	.044	.097	.121	.084
	p	.765	.432	.292	.500

Note: SRA – situational reactive anxiety; PA – personal anxiety; IGSA – indicator of general situational anxiety; SED – situational emotional discomfort; SAC – situational asthenic component; SPC – situational phobic component; SAEP – situational anxious evaluation of prospects; SSP – situational social protection; IGPA – indicator of general personal anxiety; PED – personal emotional discomfort; PAC – personal asthenic component; PPC – personal phobic component; PAEP – personal anxious evaluation of prospects; PSP – personal social protection; SbM – subject-directed motivational orientation; RsM – result-directed motivational orientation; ScM – socially-directed motivational orientation; PrM – personally-directed motivational orientation; * – $p < .050$; ** – $p < .010$.

By the parameters of motivational orientation, the following number of statistically significant correlations were established in Group 2: SbM – six; RsM – seven; ScM – six; PrM – eight. We can state that personal motivational orientation of junior athletes with high levels of the parameters of anxiety is the most dependent one which puts pressure on a junior athlete.

We can explain it by the fact that the ability to control oneself and manage one's mental state, maintain an optimal state of competitive activity is an advantage of junior athletes, and a lack of it is the largest source of anxiety.

Fig. I presents correlation pleiades of Group 1 and Group for visual comparison of the obtained differences.



Note: - - - negative correlations with $p \leq .010$; - - - - - negative correlations with $p \leq .050$; ——— positive correlations with $p \leq .010$; - - - - - positive correlations with $p \leq .050$; SRA – situational reactive anxiety; PA – personal anxiety; IGSA – indicator of general situational anxiety; SED – situational emotional discomfort; SAK – situational asthenic component; SPC – situational phobic component; SAEP – situational anxious evaluation of prospects; SSP – situational social protection; IGPA – indicator of general personal anxiety; PED – personal emotional discomfort; PAC – personal asthenic component; PPC – personal phobic component; PAEP – personal anxious evaluation of prospects; PSP – personal social protection.

Figure I. Correlation pleiades of Group 1 and Group

We can state that the investigated variables have thirty statistically significant correlations with the parameters of motivational orientation in Group 1. There are fourteen positive correlations at the level $p \leq .010$; four positive correlations at the level $p \leq .050$; eight negative correlations at the level $p \leq .010$; four negative correlations at the level $p \leq .050$ among them. There are twenty-seven statistically significant correlations of the investigated variables with the parameters of motivational orientation in Group 2. There are two positive correlations at the level $p \leq .010$; two positive correlations at the level $p \leq .050$; thirteen negative correlations at the level $p \leq .010$; ten negative correlations at the level $p \leq .050$ among them. The strongest positive correlation in Group 1 is SRA and SbM ($r = .845$; $p = .000$); the strongest negative correlations is PAEP and PrM ($r = .862$; $p = .000$). The strongest positive correlation in Group 2 is PAEP and ScM ($r = .365$; $p = .009$); the strongest negative correlation is SAEP and PrM ($r = .812$; $p = .000$).

Discussion

Sports scientific theory and practice have a great number of studies on the phenomenon, content parameters, training programs and practices of managing anxiety. Research on anxiety as an athlete's trait is still topical and highly important for all stages and types of sporting activities. Observations showed that anxiety is characteristic of beginner athletes and professional athletes with many years of successful experience. All of them risk the most valuable things – their reputation, career, support of fans or significant others. Anxiety concerns value-based regulation of personality, accompanies those life intentions which are within the scope of axiogenesis (Hulias & Hoian, 2022).

The obtained correlations (see Tabl. 4 and Tabl. 5) demonstrate quantitative dependence and regularities of psychological content parameters of anxiety and motivational orientation. It allows confirming that anxiety is a multifaceted phenomenon of sporting activities. We do not exclude that there are more such significant correlations in the sample of juniors than in the sample of adults. It is an assumption which requires confirmation in perspective. It is worth highlighting that the selection of respondents with absolutely high and low parameters (see Tabl. 3) demonstrated positive and negative statistically significant correlations at the levels ($p < .050$; $p < .010$) in both groups. It can be explained by the fact that even high parameters of anxiety (Group 1) can increase motivational orientation of respondents: PAEP and ScM ($r = .365$; $p = .009$); SAEP and ScM ($r = .356$; $p = .009$); PAEP and SbM ($r = .239$; $p = .046$); SAEP and SbM ($r = .237$; $p = .047$). Low parameters of anxiety (Group

2) demonstrate the same regularity: PAEP and ScM ($r=.399$; $p=.008$); SAEP and ScM ($r=.388$; $p=.008$); PAEP and SbM ($r=.239$; $p=.046$); SAEP and SbM ($r=.237$; $p=.047$). We substantiate that situational (SAEP) and personal (PAEP) anxious evaluation of prospects has a positive impact on subject-directed (SbM) and socially-directed (ScM) motivational orientation. The outlined dimensions are within the scope of an athlete's personal choice, social pressure and construction of the future. An aspiration to be successful, permanent uncertainty and adolescent idealism are often accompanied by excessive emotional loads of anxiety (Chebykin, 2023; Popovych et al., 2022c; 2022d). The identified dependence of adolescents' coping strategies in the dimensions of time perspective is a confirmation of our findings V. Plokhikh (2023) and N. Zavatska et al. (2023). The scientist proved that defense mechanisms can limit a leading type of an individual's mental activity (Plokhikh, 2022). Sports studies on junior athletes' performance in the dimensions of time perspective showed that the optimal profile with an obvious time perspective of the future (F) dominates in successful athletes (Popovych et al., 2022a). Other longitudinal studies focus on correlations between anxiety and prospects (McDowell et al., 2018). The identified types of pre-game expectations of athletes in team sports also confirm that the situation of the future, uncertainty and the importance of a sports competition put incredible pressure on athletes and determine their competitive behavior (Popovych et al., 2020). It is expected that actualization of prospects and a desirable future result is often accompanied by anxiety which is not noticeable at first sight. Therefore, the ability of an athlete and coaching staff to concentrate them on "the here and now" – on the time perspective of the valuable present focusing on the strategic goal is an effective practice. It can be done efficiently only through a subject activity, consequently, there are statistically significant correlations (see Fig. 1) of anxious evaluation of prospects with subject-directed motivational orientation (SbM).

We confirmed the first hypothesis that respondents with a low level of the parameters of anxiety have an advantage in the level of motivation over athletes with a high level. At the same time, we can state that there is no statistically significant advantage by the two parameters SSP ($U=623.50$; $p=.549$) and PSP ($U=532.00$; $p=.091$) (see Tabl. 3). It can be explained by the fact that the parameters of situational and personal social protection are important, but they can be equally significant for respondents with high and low levels.

The second hypothesis was also confirmed, since we registered a great number of statistically significant positive and negative correlations between high and low psychological content parameters of anxiety and respondents' motivational orientation. Such a variety of dependences of the parameters of anxiety allows stating the relevance of research on anxiety as a multifaceted phenomenon in the dimensions of motivational orientation of junior athletes.

Conclusions

It was substantiated that anxiety is a multifaceted phenomenon in the dimensions of junior athletes' motivational orientation which combines a number of internal and external factors affecting psycho-physiological reactions of a junior athlete's body and determining their motivational orientation.

It was found that junior athletes with a low level of the parameters of anxiety have an advantage in the level of motivation over athletes with a high level. A lack of advantage in the parameters of situational and social protection – SSP ($U=623.50$; $p=.549$) and PSP ($U=532.00$; $p=.091$) – can be explained by an equally important impact of this parameter for respondents with a high level and respondents with a low level. It was proved that high and low psychological content parameters of anxiety have statistically significant correlations with the respondents' motivational orientation: Group 1 – thirty correlations; Group 2 – twenty-seven correlations.

It was empirically established and substantiated that situational (SAEP) and personal (PAEP) anxious evaluation of prospects has a positive impact on subject-directed (SbM) and socially directed (ScM) motivational orientation. Since the outlined dimensions are within the scope of a personal choice, social pressure and construction of the future, they require psychological assistance and appropriate attention of coaching and teaching staff of sports schools for children and young people, youth academies of professional clubs. The obtained results possess scientific novelty and can be recommended for implementation in educational and training process of junior athletes.

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