RELATIONSHIP BETWEEN ATHLETES' PERCEIVED MOTIVATIONAL CLIMATE AND GROUP COHESION

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ABSTRACT
Perceived motivational climate and group cohesion are important factors affecting performance in team sports. The purpose of this study was to examine the relationship between the perceived motivational climate and group cohesion among athletes differentiated by sex, type of sport, and sports results. The research was conducted among 356 athletes, comprising 193 men and 163 women, who practiced team sports (volleyball, basketball, football, rugby, handball, field hockey, and baseball) with a mean age of 18.6 years (±4.6 years). Methods: The Perceived Motivational Climate Questionnaire-2 (PMCSQ-2) and the Group Environment Questionnaire (GEQ), adapted for Bulgarian conditions, were used.
*Results: The perceived mastery-oriented motivational climate is leading among the surveyed persons in general. A stepwise regression analysis was conducted to investigate the impact of the perceived motivational climate on group cohesion. Cooperative learning (β = .267**) and effort and improvement (β = .124**) increase individual attraction to group tasks (ATG-T), while punishment for mistakes (β = -.106**) decreases it. Individual attraction to group tasks is enhanced in cooperative learning (β = .135**) and decreases in the dominance of a performance-oriented motivational climate (β = -.274**). Group integration-social (GI-S) is positively affected by cooperative learning (β = .388**) and negatively by unequal recognition (β = -.202**). Perceived mastery-oriented motivational climate positively influences group integration-task (β=.329**), and perceived performance-oriented motivational climate (β=-.127**) negatively influences group integration–task. Conclusion: The results of this study give reason to assume that the perceived motivational climate affects group cohesion of athletes practicing team sports. They provide guidance to coaches for building an appropriate motivational climate related to optimal sports performance.*

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INTRODUCTION

Perceived motivational climate and group cohesion are essential factors affecting performance in team sports. The social environment and individual variables influence the way people think, feel, and behave. The motivational climate is related to the subjective assessment of environmental factors. Two types of perceived motivational climate are distinguished - mastery-oriented and performance-oriented (Ames, 1992; Duda & Balaguer, 2007; Ruiz et al., 2019; Castillo-Jiménez et al., 2022; Domuschieva-Rogleva, 2023).

In the perceived motivational climate oriented to mastery (mastery-oriented climate), the acquisition and improvement of habits and skills, as well as social recognition for the efforts invested, are highly valued (Domuschieva-Rogleva, 2023). This type of climate is associated with psychological well-being and resilience (Shanmugaratnam et al., 2024), higher intrinsic motivation for engaging in sports (Mitsova, 2020; Kiss et al., 2024), as well as higher levels of group cohesion and collective efficacy (Heuze et al., 2006; Çepikkurt & Uluöz, 2017). These factors, in turn, lead to higher levels of satisfaction with sports activities (Mitsova, 2020; Domuschieva-Rogleva, 2023) and better performance (Mitsova, 2019).

The perceived performance motivational climate (performance motivational climate) is associated with lower levels of motivation and sports performance (Mitsova, 2020), as well as more frequent occurrences of doping and cheating (Kristensen et al., 2025), lower group cohesion and team commitment (Jowett & Duda, 2008), and higher levels of burnout (Shanmugaratnam et al., 2024). The emphasis is placed on punishing mistakes (Domuschieva-Rogleva, 2023), comparing individual abilities to those of others (Kiss et al., 2024), fear of failure and increased anxiety (Smith et al., 2007; Azevedo et al., 2025), as well as a focus on short-term rather than long-term goals (Kiss et al., 2024). Another significant factor that influences the func-

tioning and performance of sports teams is group cohesion (Mullen & Cooper, 1994; Carron et al., 2002; Iancheva & Iskrov, 2011; Eys & Brawley, 2018; Dobrijević et al., 2020; Grossman et al., 2022; Clerck et al., 2025). Carron et al. (1998) defined group cohesion as "a dynamic process that is reflected in the tendency for a group to stick together and remain united in the pursuit of its instrumental objectives and/or for the satisfaction of member affective needs" (p. 213). According to Iancheva (2020), this is the result of all the forces acting on individual members to remain in the group.

Carron et al. (1985) proposed a conceptual model of group cohesion, according to which there are two main components of group effectiveness: group integration and individual attraction to the group. Consequently, four dimensions of group cohesion are distinguished: Individual attractions to the group-task (ATG-T), Individual attractions to the group-social (ATG-S), Group integration task (GI-T), and Group integration-social (GI-S) (Carron et al., 1985).

Task cohesion reflects how group members work together to achieve common goals and objectives. In sports, the common goal and task is to defeat the opponent, which in part depends on coordinated team efforts or teamwork. Social cohesion is a result of personal attraction among group members. For example, the extent to which team members like each other and enjoy being in their group. According to Eys & Brawley (2018), an excessive emphasis on task cohesion can escalate performance pressure, while an overemphasis on social cohesion can induce conformity pressures (Eys & Brawley, 2018).

Teams with a high level of cohesion generally show better results, experience fewer conflicts, and recover more quickly after setbacks (Cashmore, 2002; Williamson, 2007; Deepak, 2025).

Clerck et al. (2025) note that a relentless focus on tasks within the group, devoid of attention to nurturing social bonds, can result in feelings of isolation or alienation among group members. In contrast, groups may find themselves overly absorbed in social interactions and the maintenance of harmony, inadvertently sidelining progress on tasks. The authors recommend that groups actively strive for a balance between social and task cohesion, as this enables them to build positive group dynamics, improve their performance, and effectively achieve their goals (Clerck et al., 2025).

The aim of this study was to reveal the interrelationships between perceived motivational climate and group cohesion in athletes differentiated by gender, type of sport, and sports results.

METHODOLOGY

Participants

The research was done among 356 athletes (193 men, 163 women) practicing team sports - volleyball, football, basketball, handball, rugby, field hockey, and baseball; with a mean age of 18.6 years (±4.6). There are 173 medal-winning athletes, and 183 are ranked after third place. Signed informed consent for voluntary participation in the study was obtained from a parent or participant, respectively.

Methods

1. *Perceived Motivational Climate in Sport Questionnaire-2* (PMCSQ-2) (Newton, Duda, & Yin, 2000), adapted to Bulgarian conditions (Domuschieva-Rogleva, 2007). It measures two factors: mastery-oriented motivational climate (determined by 17 questions referring to the following subscales: significance of the role, cooperative learning, and effort/improvement) and performance-oriented motivational climate (comprising 16 items forming the following subscales: unequal recognition, punishment for mistakes, and intra-team member rivalry).
2. *Group Environment Questionnaire (GEQ),* (Carron, Widmeyer, & Brawley, 1985). The test contains four subscales: individual attractions to group task (ATG-T), individual attractions to group social (ATG-S), group integration task (GI-T), and group integration-social (GI-S).

RESULTS

The perceived mastery-oriented motivational climate was the leading motivational climate among the subjects in general (M = 4.28; SD = 0.49) and for all studied groups, whereas the perceived performance-oriented motivational climate had lower values.

Statistically significant differences were found in the studied individuals, grouped by gender, type of sport, and sports results. Among the athletes, differentiated according to gender, punishment for mistakes (U = 13201.000; p = .009) was statistically significantly higher in the female group (M = 2.88; SD = 0.87) than in the male group (M = 2.65; SD = 0.81) (Table 1).

Table 1. *Average values of the motivational climate of the studied athletes overall and grouped by gender*

Variables	Significance of the role		Effort/ improvement		Cooperative learning		Unequal recognition		Punishment for mistakes		Intra-team member rivalry		Mastery		Performance	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Athletes in the research	4.35	0.59	4.39	0.51	4.08	0.67	2.61	0.76	2.75	0.85	2.99	0.70	4.28	0.49	2.78	0.65
Women	4.42	0.63	4.43	0.52	4.10	0.72	2.54	0.82	***2.88***	0.87	2.96	0.73	4.32	0.50	2.79	0.85
Men	4.29	0.55	4.36	0.55	4.08	0.63	2.67	0.71	***2.65***	0.81	3.01	0.68	4.24	0.48	2.78	0.59

*Notes:**Darker numbers in this and the following tables indicate the presence of statistically significant differences in the studied variables between individual groups.*

Among athletes grouped by sports discipline (basketball, volleyball, soccer, handball, rugby, field hockey, and baseball), statistically significant differences (Kruskal-Wallis test) were found on the components: mastery-oriented motivational climate (H = 14.659; p = .023) and its subscales cooperative learning (H = 6.416; p = .012) significance of the role (H = 18.132; p = .006), performance-oriented motivational climate (H = 24.030; p = .001) and the punishment for mistakes subscale (H = 67.772; $p <$ .001) (Table 2).

Table 2. *Average values of the motivational climate according to type of sport*

Variables	Significance of the role		Effort/improvement		Cooperative learning		Unequal recognition		Punishment for mistakes		Intra-team member rivalry		Mastery		Performance	
Type of sport	***M***	***SD***	***M***	***SD***	***M***	***SD***	***M***	***SD***	***M***	***SD***	***M***	***SD***	***M***	***SD***	***M***	***SD***
Volleyball	***4.38***	0.51	4.49	0.45	***4.09***	0.74	2.62	0.81	***3.03***	0.80	3.09	0.69	***4.32***	0.48	***2.91***	0.66
Basketball	***4.33***	0.47	4.38	0.38	***4.10***	0.63	2.60	0.69	***3.32***	0.78	3.11	0.67	***4.27***	0.42	***3.01***	0.60
Football	***4.30***	0.74	4.39	0.55	***3.93***	0.71	2.69	0.84	***2.64***	0.79	3.00	0.69	***4.21***	0.54	***2.78***	0.65
Handball	***4.40***	0.38	4.40	0.45	***4.26***	0.54	2.44	0.46	***2.88***	0.68	2.73	0.62	***4.35***	0.39	***2.68***	0.47
Rugby	***4.44***	0.52	4.32	0.56	***4.30***	0.62	2.37	0.81	***2.16***	0.78	2.69	0.80	***4.35***	0.50	***2.41***	0.73
Field hockey	***4.20***	0.50	4.11	0.62	***4.11***	0.49	2.67	0.73	***2.83***	0.74	3.04	0.85	***4.14***	0.43	***2.85***	0.66
Baseball	***4.78***	0.22	4.63	0.31	***4,46***	0.43	2.66	0.32	***1.66***	0.46	3.15	0.34	***4.62***	0.27	***2.49***	0.24

Regarding the sports results, the punishment for mistakes is statistically significantly more pronounced (U = 13526.000; p = .017) in the prize-winner group (M = 2.86; SD = 0.83) than in the rank-after-third-place group (M = 2.65; SD = 0.85).

In terms of group cohesion, the leading subscale among the subjects in general (M = 3.73; SD = 0.64) and for all studied groups was individual attraction to the group-social activity (ATG-S). These results indicate that team members feel close and loyal to the team (Table 3).

Table 3. *Average values of the group cohesion of the studied persons overall and grouped by gender*

Variables	GI-T		GI-S		ATG-T		ATG-S	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Athletes in the research	3.58	0.56	3.48	0.76	3.40	0.66	3.73	0.64
Women	3.50	0.76	3.05	0.76	3.47	0.62	3.72	0.67
Men	3.63	0.56	3.46	0.76	3.35	0.70	3.73	0.61

Legend: ATG-T: Individual attractions to group-task; ATG-S: Individual attractions to group social; GI-T: Group integration-task; GI-S: Group integration- social.

Statistically significant differences were found among the studied athletes grouped by type of sport. Such differences were not found among the groups divided by gender and ranking.

Among athletes grouped by sports disciplines (basketball, volleyball, soccer, handball, rugby, field hockey, and baseball), the subscale of individual attraction to the group - task (ATG-T) (H = 27.028; p = .001) (Kruskal-Wallis test) was significantly higher in baseball athletes (M =3.73; SD = 0.64), handball (M = 3.61; SD = 0.72), and rugby (M = 3.53; SD = 0.80), compared to the other groups by type of sport.

Correlation analysis (Spearman's test) was applied to reveal the relationships and interdependencies between the studied variables (Table 4).

Table 4. *The correlation analysis results between perceived motivational climate components and group cohesion.*

Variables	ATG-T	ATG-S	GI-T	GI-S
Significance of the role	.158**	.271**	.318**	.293**
Effort/improvement	.109*	.272*	.318**	.236**
Cooperative learning	.227**	.343**	.381**	.441**
Unequal recognition	-.280**	-.204**	-.296**	-.335**
Punishment for mistakes	-.221**	-.198**	-.223**	-.186**
Intra-team member rivalry	-.267**	-.116*	-.164**	-.269**
MASTERY	.202**	.344**	.398**	.396**
PERFORMANCE	-.309**	-.227**	-.277**	-.316**

Legend: ATG-T - Individual attractions to group-task; ATG-S - Individual attractions to group social; GI-T - Group integration-task; GI-S - Group integration-social.

Positive correlations were found between the mastery-oriented motivational climate and its subscales: role significance, effort/ improvement, cooperative learning, and the components of group cohesion. In addition, negative correlations were found between the performance-oriented motivational climate and its subscales: unequal recognition, punishment for mistakes, intra-team member rivalry, and the group cohesion components: individual attraction to group-task, individual attraction to group-social, group integration-task, and group integration-social.

A stepwise regression analysis was conducted to investigate the impact of the perceived motivational climate on group cohesion. Cooperative learning (β = .267**) and effort and improvement (β = .124**) increase individual attraction to group-social (ATG-S), while punishment for mistakes (β = -.106**) decreases it. Individual attraction to group-task (ATG-T) is enhanced in cooperative learning (β = .135**) and decreases in the dominance of a performance-oriented motivational climate (β = -.274**) (Table 5).

Table 5. *Results of regression analysis - 1*

Variables	Individual attractions to group-task (ATG-T)				Individual attractions to group-social (ATG-S)			
	B	***t***	***sig.***	***Δ R²***	***β***	***t***	***sig.***	***Δ R²***
Cooperative learning	.135	2.512	.012	.115	.267	4.619	.001	.125
Effort/ improvement					.124	2.176	.030	.137
Punishment for mistakes					-.106	-2.060	.040	.144
PERFORMANCE	-.274	-5.115	.001	.102				

Group integration-social (GI-S) is positively affected by cooperative learning (β = .388**) and negatively affected by unequal recognition (β = -.202**). Perceived mastery-oriented motivational climate influences positively (β = .329**), and perceived performance-oriented motivational climate (β = -.127**) negatively influences group integration – Task (GI-T) (Table 6).

Table 6. *Results of regression analysis - 2*

Variables	Group Integration- Task (GI-T)				Group Integration- Social (GI-S)			
	β	***t***	***sig.***	***Δ R²***	***β***	***t***	***sig.***	***Δ R²***
MASTERY	.329	6.251	.001	.138				
Cooperative learning					.388	7.782	.001	.214
PERFORMANCE	-.127	-2.415	.016	.150				
Unequal recognition					-.202	-4.045	.001	.246

DISCUSSION

This study aims to reveal the characteristics of the perceived motivational climate and group cohesion in team sports athletes.

The perceived mastery-oriented motivational climate is leading among the surveyed persons in general. The results confirm what was found in other studies (Mitsova, 2019; Savcheva & Domuschieva-Rogleva, 2019; Kapitanski, 2022; Domuschieva-Rogleva, 2023; Castro-Sánchez et al., 2018;

Calvo & Topa, 2019; Kiss et al., 2024; Azevedo et al., 2025). Statistically significant differences were found in the studied persons, grouped by gender, type of sport, and sports results.

In terms of group cohesion, the leading subscale among the subjects in general and for all studied groups was an individual attraction to the group-social activity (ATG-S). Statistically significant differences were found among the studied persons grouped by type of sport - the subscale of individual attraction to the group-task (ATG-T) was significantly higher in baseball athletes, handball, and rugby, compared to the other groups (by type of sport). Such differences were not found among the studied persons differentiated by gender and sports results.

Positive correlations were found between the mastery-oriented motivational climate and its subscales: role significance, effort/ improvement, cooperative learning, and the components of group cohesion. The results confirm findings from other studies (Çepikkurt & Uluöz, 2017; Weiss et al., 2021). On the other hand, negative correlations were found between the performance-oriented motivational climate and its subscales, as well as the group cohesion components. Other studies have also established similar trends (Çepikkurt & Uluöz, 2017).

The results of the regression analysis indicate that the implementation of a perceived mastery-oriented motivational climate, along with its subscales, increases group cohesion within the team. Other studies have found similar trends, while mentioning that the coach's performance-oriented motivational climate and its subscales lead to lower levels of cohesion (Heuze et al., 2006; Çepikkurt & Uluöz, 2017; Weiss et al., 2021).

CONCLUSION

The results of this study give reason to assume that the perceived motivational climate affects group cohesion of athletes practicing team sports. They provide guidance to coaches for building an appropriate motivational climate related to optimal sports performance.

The established trends in this study give reason to assume that the perceived motivational climate plays a significant role in forming group cohesion. The mastery-oriented motivational climate and the components of cooperative learning, effort, and improvement lead to an increase in the four aspects of group cohesion. The perceived performance-oriented motivational climate, unequal recognition, and punishment for mistakes negatively influence the components of group integration.

REFERENCES

Ames, C. (1992). *Achievement goals, motivational climate, and motivational processes.* In G. Roberts (Ed.), Motivation in sport and exercise. Champaign, IL: Human Kinetics. pp. 161–176.

Azevedo, J., Fonseca, A. M., & Dias, C. (2025). The role of achievement goals and motivational climates in understanding youth athlete emotions: A study with youth team players. *PsychTech & Health Journal*, *8*(2), 12–22. https://doi.org/10.26580/PTHJ.art75-2025

Calvo, C., & Topa, G. (2019). Leadership and motivational climate: The relationship with objectives, commitment, and satisfaction in base soccer players. *Behavioral Science*, 9, 29.

Carron, A. V., Brawley, L. R., & Widmeyer, W. N. (1998). *The Measurement of Cohesiveness in Sport Groups.* In Duda J.L. (Eds.) Advances in Sport and Exercise Psychology Measurements. Morgantown, WV: Fitness Information Technology, 213–226.

Carron, A. V., Colman, M. M., Wheeler, J., & Stevens, D. (2002). Cohesion and performance in sport: A meta-analysis. *Journal of Sport & Exercise Psychology, 24*(2), 168–188. Retrieved from: http://search.proquest.com/docview/619753123?accountid=4840.

Carron, A. V., Widmeyer, L. R., & Brawley, L. R. (1985). The development of an instrument to assess cohesion in sport teams: The Group Environment Questionnaire. *Journal of Sport Psychology, 7,* 244–266.

Cashmore E. (2002). Sport and Exercise Psychology: The Key Concepts (2nd ed.). London: Routledge.

Castro-Sánchez, M., Zurita-Ortega, F., Ubago-Jiménez, J., Ramírez-Granizo, I., & Chacón-Cuberos, R. (2018). Motivational climate in youth football players. *Behavioral Sciences, 8*(9), 83. https://doi.org/10.3390/bs8090083

Çepikkurt, F, & Uluöz, E. (2017). Predictive power of group cohesion and perceived motivational climate for collective efficacy perception in the football teams. *Sport and Society. International Journal of Physical Education and Sport, 17*(1), 91–97.

Clerck, D. T., Doren, V. N., & De Bock, T. D. (2025). The role of leadership in group cohesion: Insights from sport club volunteering. *Organiza-*

tion Management Journal, 22(2), 99–110. https://doi.org/10.1108/OMJ-01-2024-2061

Deepak, S. S. (2025). Unified for success: How cohesiveness fuels sports excellence. *International Journal of Physiology, Nutrition and Physical Education, 10*(1), 96–97. https://doi.org/10.22271/journalofsport.2025.v10.i1b.3022

Dobrijević, G., Jovanović, Đ., Boljanović, S., Alčaković, D., & Lazarević, S. (2020). Perception of cohesion in interactive sport teams. *Facta Universitatis, Series: Physical Education and Sport, 18*(2), 431–438.

Domuschieva-Rogleva, G. (2007). Aprobacia na testa za vazpriet motivacionen klimat (PMCSQ-2) v balgarski usloviia [Adaptation of the Perceived Motivational Climate Questionnaire (PMCSQ-2) in Bulgarian conditions]. *Lichnost, motivaciia, sport, 12*, 46–53. National Sports Academy Press. (in Bulgarian)

Domuschieva-Rogleva, G. (2023). *Motivatsionni determinanti na zanimaniyata sas sport* [Motivational determinants of sports activities]. Sofia: NSA Press. (in Bulgarian)

Duda, J. L., & Balaguer, I. (2007). Coach-created motivational climate. In S. Jowett & D. Lavallee (Eds.), *Social psychology in sport* (pp. 117–130). Human Kinetics. https://doi.org/10.5040/9781492595878.ch-009

Eys, M. A., & Brawley, L. R. (2018). Reflections on cohesion research with sport and exercise groups. *Personality and Social Psychology Compass, 12*(4), e12379. https://doi.org/10.1111/spc3.12379

Grossman, R., Nolan, K., Rosch, Z., Mazer, D., & Salas, E. (2021). The team cohesion-performance relationship: A meta-analysis exploring measurement approaches and the changing team landscape. *Organizational Psychology Review*, *12*(2), 181-238. https://doi.org/10.1177/20413866211041157

Heuzé, J.-P., Sarrazin, P., Masiero, M., Raimbault, N., & Thomas, J.-P. (2006). The relationships of perceived motivational climate to cohesion and collective efficacy in elite female teams. *Journal of Applied Sport Psychology, 18*(3), 201–218. https://doi.org/10.1080/10413200600830273

Iancheva, T. (2020). *Psihologichesko osiguryavane v elitniya sport* [Psychological support in elite sport] (3rd revised and expanded ed.). NSA Press.

Iancheva, T., & Iskrov, V. (2011). Splotenost i kolektivna efektivnost pri 13–14-godishni basketbolisti [Cohesion and collective efficacy in 13–14-year-old basketball players]. *Lichnost. Motivatsiya. Sport, 16.* NSA Press.

Jowett, S., & Duda, J. L. (2008). The psychological interface between the coach-created motivational climate and the coach–athlete relationship in team sports. *The Sport Psychologist, 22*(4), 423–438.

Kapitanski, A. (2022). The influence of the coach's leadership style and motivational climate on the perception of support for autonomous behavior. In *Proceedings of the International Scientific Congress "Applied Sports Sciences" (Vol. 1, pp. 386–390)*. National Sports Academy "Vassil Levski."

Kiss, C., & Attila, N. (2024). Motivation profiles, perceived motivational climate, coping perceptions, and anxiety among elite young ice hockey players. *Physical Culture and Sport. Studies and Research, 105*(1), 65–81. https://doi.org/10.2478/pcssr-2024-0025

Kristensen, J. Å., Kavussanu, M., & Ommundsen, Y. (2025). Perceived motivational climate, doping attitudes, and doping temptation among elite adolescent athletes: The moderating role of perfectionism. *European journal of sport science*, *25*(3), e12244. https://doi.org/10.1002/ejsc.12244

Mitsova, I. (2020). *Vliyanie na motivatsiyata vŭrkhu udovletvorenostta ot zanimaniyata sŭs sport pri razlichni grupi sŭstezateli* [Doctoral dissertation, Blagoevgrad].

Mitsova, I. (2019). Reciprocity between goal orientation and motivational climate in different groups of athletes. In *Proceedings of the International Scientific Congress "Applied Sports Sciences"* (pp. 231–234). National Sports Academy Press. https://doi.org/10.37393/ICASS2019/44

Mullen, B., & Copper, C. (1994). The relation between group cohesiveness and performance: An integration. *Psychological Bulletin, 115*(2), 210–227. https://doi.org/10.1037/0033-2909.115.2.210

Newton, M., Duda, J. L., & Yin, Z. (2000). Examination of the psychometric properties of the perceived motivational climate in sport questionnaire-2 in a sample of female athletes. *Journal of sports sciences*, *18*(4), 275–290. https://doi.org/10.1080/026404100365018

Ruiz, M. C., Robazza, C., Tolvanen, A., Haapanen, S., & Duda, J. L. (2019). Coach-created motivational climate and athletes' adaptation to psychological stress: Temporal motivation-emotion interplay. *Frontiers in Psychology, 10*, 617. https://doi.org/10.3389/fpsyg.2019.00617

Savcheva, E., & Domuschieva-Rogleva, G.

(2019). Motivatsionni aspekti na zanimaniyata sas sport pri fehtovachi [Motivational aspects of sport participation among fencers]. In *Lichnost. Motivatsia. Sport* (Vol. 23, pp. 65–74). NSA Press. (in Bulgarian).

Shanmugaratnam, A., McLaren, C. D., Schertzinger, M., & Bruner, M. W. (2025). Exploring the relationship between coach-initiated motivational climate and athlete well-being, resilience, and psychological safety in competitive sport teams. *International Journal of Sports Science & Coaching, 20*(1), 70–78. https://doi.org/10.1177/17479541241278602

Smith, R. E., Smoll, F. L., & Cumming, S. P. (2007). Effects of a motivational climate intervention for coaches on young athletes' sport performance anxiety. *Journal of Sport & Exercise Psychology, 29*(1), 39–59. https://doi.org/10.1123/jsep.29.1.39

Weiss, M. R., Moehnke, H. J., & Kipp, L. E. (2021). A united front: Coach and teammate motivational climate and team cohesion among female adolescent athletes. *International Journal of Sports Science & Coaching, 16*(4), 875–885. https://doi.org/10.1177/17479541211006905

Williamson, S. N. (2007). Development of a self-rating scale of self-directed learning. *Nurse Researcher, 14*(2), 66–83. https://doi.org/10.7748/nr2007.01.14.2.66.c6022

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