

**NATIONAL SPORTS ACADEMY
„VASSIL LEVSKI“**

**DEPARTMENT „PSYCHOLOGY, PEDAGOGY AND
SOCIOLOGY“**



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**GROUP COHESION, EFFICACY AND
SATISFACTION IN TEAM SPORTS**

A B S T R A C T

Sofia, 2023

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A B S T R A C T

for awarding the educational and scientific degree "Doctor" in a
PhD program "Sports Psychology", professional direction 7.6. Sports

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Sofia, 2023

The dissertation on the topic "Group cohesion, efficiency and satisfaction in team sports" was discussed, approved and directed for defense by an extended scientific collegium of the Department of Psychology, Pedagogy and Sociology at Vasil Levski National Academy of Sciences, Sofia on 31.10.2023 Mr.

Volume: 243 pages.

Literature: 222 sources - 49 in Cyrillic, 173 in Latin

Tables: 61

Figures: 55

Application: 11 pages.

The numbering of the tables and figures in the abstract matches that of the dissertation.

The public defense of the dissertation work will take place on 17.01.2024 at 3:00 p.m. in Hall "A3" of the Vasil Levski National Academy of Sciences, Studentski Grad, Sofia.

Scientific jury for the public defence procedure

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The defense materials are published on the NSA "Vasil Levski" website at www.nsa.bg and are located in the NSA library.

INTRODUCTION

Research on group characteristics and motivational determinants in the field of sports has multiplied because they are seen as a significant prerequisite for achieving success in team sports.

From a practical point of view, the higher the level of a given sport, the higher the sports achievements, and the more complex the problems faced by athletes and coaches in sports preparation and competitive realization (Iancheva, 2020).

Team sports significantly impact motivation and relationships between individual team members, group cohesion, and collective effectiveness. Success is the result of the entire team's efforts. Conversely, the coach has the most significant influence on the team's actions, behavior, and goals.

Previous Bulgarian studies emphasize the importance of a number of psychological variables related to development, management, and motivation in sports (Iancheva, 2007; Iancheva, Iskrov, 2011; Iancheva et al., 2012; Yordanov, 2012; Iskrov, 2016; Prodanov, 2020; Mitsova, 2020a; Domuschieva-Rogleva, 2023a).

As a former national soccer player, with extensive practical experience, with participation in over ten international qualifying tournaments in the UEFA Champions League (Macedonia, Slovenia, and Bulgaria) and a licensed soccer coach (UEFFA C and UEFFA B goalkeeper license), I believe that the role of the coach is an essential prerequisite for successful and effective implementation in athletes practicing team sports.

This dissertation examines psychological variables relevant to sports games: goal orientation, motivational climate, long-term motivation, leadership style, collective effectiveness, group cohesion, and their influence on satisfaction with sports activities in athletes practicing team sports.

THE FIRST CHAPTER includes a theoretical analysis of the study and is divided into three paragraphs dealing with the main aspects of the researched issues.

The first paragraph of the theoretical analysis examines the socio-psychological aspects of the sports team - psychological characteristics of team sports, leadership style, group cohesion, and collective effectiveness.

1.1. Psychological characteristics of team sports

Modern sport is seen as a collective activity in its nature. The sports team must possess four key characteristics:

- *a collective sense of identity*: "we" not "I";
- *characteristic roles*: all team members are aware of their roles;
- *structured mode of communication*;
- *norms*: social rules that guide members on what to do and what not to do (Weinberg & Gould, 2019).

"Sports groups (teams) are a specific type of small social groups (from two to 40 people). They unite people who interact for the joint implementation of predetermined common goals. The main features that characterize a sports team as a small social group are the interdependence between team members, their joint activity, and the pursuit of common goals" (Geron, Mutafova-Zaberska, 2021, p. 305).

According to T. Iancheva (2020), in team sports there is an objectively complicated situation, caused by the need to coordinate actions, coordinate efforts, and adapt individual behavior to the requirements arising from the common goal and the collective result; the presence of others, of teammates creates greater security, feeling and support, mutual acceptance and distribution of responsibility (Iancheva, 2020).

From a practical point of view, psychological provision is often neglected by coaches, believing that success is the result of the athlete's physical abilities and technical and tactical skills. It often happens that in the composition of elite teams, individualists want to perform brilliantly and rely only on their abilities, not on the whole team's abilities. These athletes are highly competent and focused solely on results. Conversely, coaches often seek victory at all costs and rely on individual performers, applying unfair recognition, creating group divisions in large teams, leading to low levels of cohesion efficiency and creating conflict situations.

Working in teams is a complex process and requires effort, persistence, maintaining motivation, teamwork, support, conflict management, and coping with stress and anxiety during competitions. Particular attention is paid to leadership style, group cohesion, and collective effectiveness as essential variables for all athletes and coaches participating in team sports.

1.2. Leadership style in sports

Leadership is the process by which an individual influences a group of people to achieve a common goal. The coaching leadership style is defined by the specific ways and means by which the coach manages the team.

In social and sports psychology, we encounter many definitions related to leadership. According to M. Chemeres, "leadership is a process of social influence in which one person can win the help and support of others in the performance of a common task" (Chemeres, 1997, pp. 76, 77).

P. Chelladurai and H. Riemer (1998) proposed a multidimensional model of leadership in sport, based on the underlying concepts of leadership in different social spheres. According to the model, athlete satisfaction and team effectiveness are a function of the combined impact of the leader's required, preferred, and actual behaviors.

The required behavior of the leader includes the expected and situationally determined features - parameters of the organization, its environment, normative decisions, age, gender, etc.

A leader's preferred behavior is determined by team member characteristics and situational variables.

Actual behavior is a function of leader characteristics, expected behavior, required behavior, preferred behavior, group effectiveness, and degree of satisfaction.

According to Chelladurai, a good sports leader needs to develop his leadership qualities by expanding his technical, cognitive, and emotional skills depending on the type of sport (Chelladurai, 2007).

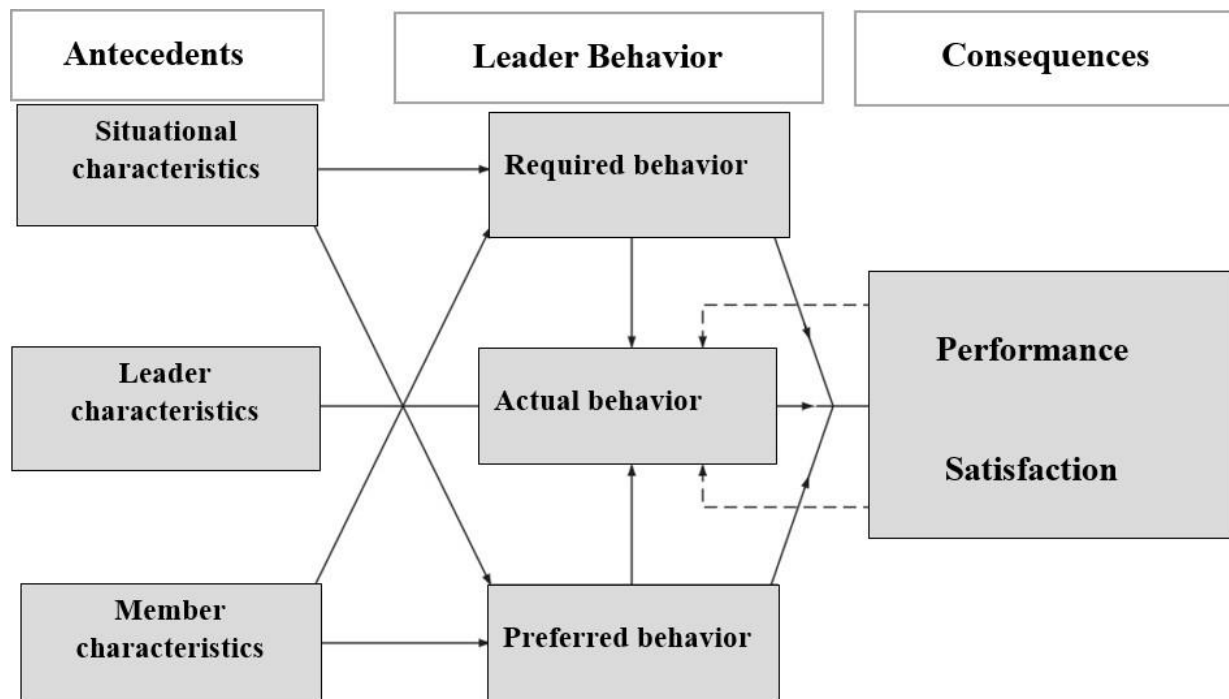


Figure 1. A multidimensional model of leadership style in sport (Cox, 2012, p 383) was modeled by (Chelladurai, 1993).

If the leader is required to behave in a certain way (required behavior) in a particular environment and does so (actual behavior) and if this behavior is preferred by the group (preferred behavior), then there is a high probability that the group will be satisfied with the leader and his way of leadership leading to a higher level of performance (Chelladurai, 2007).

Effective leadership is a significant factor in achieving:

Satisfaction - compatibility between coach and athlete in decision-making, coach support, reward, and democratic decisions are generally associated with greater athlete satisfaction. Athletes practicing team sports place more importance on positive coaching behavior than those involved in individual sports;

cohesion – coaches with a high level of competence, democratic behavior, social support, positive feedback, and low autocratic behavior have teams with greater cohesion;

performance – losing teams need more social support from their leaders (coaches) to maintain their motivation (Domuschieva-Rogleva, 2023b).

1.3. Group cohesion

Group cohesion is one of the most critical factors in the study of small-group group dynamics and has historically been one of the most researched constructs at the group level. In a sports context, its influence on sports performance, especially in team sports, is considered.

Cohesion is defined 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” (Carron et al., 1998, p. 213). This definition emphasizes the idea that cohesion is multidimensional (many factors relate to why a group holds together), dynamic (cohesion in a group can change over time), instrumental (groups are created with a purpose), and emotional (social interactions of members evoke feelings among group members).

Group cohesion is determined by two independent components – task-related (business cohesion) and social (emotional cohesion).

Task cohesion (work-oriented) 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 (emotional) due to personal attraction among group members. For example, the extent to which team members like each other and enjoy their group.

Of particular interest to group cohesion are the factors that determine its nature. A. Carron (1982) developed a model for group cohesion and outlined five main factors influencing the development of cohesion in sports activities such as environmental factors, personal factors, leadership factors, team factors, and sports results.

Environmental factors that can influence teams relate to: *the environment* (geographical, factors, the opportunity to play against other teams), *the social climate* (pressure from coaches, parents, teammates), and *competition/intergroup conflict* (tension, hostility in the teams).

Personality factors refer to the individual characteristics of athletes that contribute to their efforts for team success. This includes individual characteristics (e.g. gender, social origin), mental compatibility, typological features, and temperament.

Leadership factors include the leadership style, the team relationships, and the behaviors the athletes exhibit in the team. Multiple studies in sports show that the coach's leadership style is one of the main factors that influence team cohesion.

Team factors refer to group characteristics that operate within the team, such as group norms, desire for group success, group roles, collective effectiveness, team stability, etc.

The results occur on both a team and individual level. At the team level, results are looked at in terms of team stability (whether the team is cohesive, especially in times of adversity) and absolute and relative performance. At the individual level, outcomes are viewed as behavioral consequences (e.g., how much effort is put into working together), satisfaction, closeness, and absolute effectiveness (Weinberg & Gould, 2019).

1.4. Collective efficiency

Social cognitive theory provides a framework for understanding how people form beliefs about their ability to perform tasks successfully. These beliefs shape a person's perceived personal efficacy toward task performance (Bandura, 1982, 1997). Self-efficacy is an individual-level construct. Bandura defines self-efficacy as "beliefs in one's abilities to organize and perform the actions necessary to achieve a given goal" (Bandura, 1997, p. 3).

A. Bandura (1997) extends this concept to the group level, suggesting that people do not live in social isolation and often work together to achieve collective goals. This is especially important in sports, where athletes often compete against each other in teams. Under such circumstances, athletes naturally empathize with the feelings of their teammates and reflect and maintain beliefs about the team's ability to achieve its goals. This means that group members perceive collective efficacy at the group level.

Collective efficacy is defined as "a group's belief in their joint abilities to organize and carry out actions necessary to achieve a given goal" (Bandura, 1997, p. 477).

Collective efficiency focuses solely on team capabilities. It is not determined by how confident an athlete is in himself or another team member, but rather by the confidence of each member in the entire group (Elms et al., 2023). It helps direct the group's efforts toward a specific task (Rapp et al., 2021).

Collective efficacy is among the most important variables related to sports performance and team success. Numerous studies have established a positive relationship between collective effectiveness and numerous other factors: performance (Stajkovic et al., 2009; Elms, et al., 2023) satisfaction (Luu & Narayan, 2017), group cohesion (Heuzé et al., 2006a), leadership style (Høigaard, et al., 2015; Leo, et al., 2022), goal-oriented task orientation (Blecharz, et al., 2014; Junior, et al., 2019) mastery-oriented motivational climate (Heuzé et al., 2006 b; Kao & Watson, 2014; Çepikkur & Eren 2017), the coach-athlete relationship (Nikolić & Çabarkapa, 2010), etc.

Teams with higher levels of collective efficacy are hypothesized to perform better than teams with lower levels of collective efficacy. Conversely, low levels of collective efficacy may lead to higher levels of anxiety, worry, low confidence, and failure during competition.

The second paragraph of the theoretical analysis presents research related to motivation in team sports. The main theoretical approaches are examined regarding goal orientation, motivational climate, and long-term motivation.

2.1. Motivation in team sports

Research on motivation in the field of sports is particularly relevant because it is seen as an essential prerequisite for achieving success. Many studies in the field of sports psychology have attempted to explain the impact of various motivational attitudes on sports performance.

Motivation is an internal process that activates, directs, maintains, and regulates behavior guided by the relevant goal (Domuschieva-Rogleva, 2023a).

Motivation is a factor on which the effectiveness of sports activities and the level of achievements of athletes depends (Rogaleva et al., 2018).

The sports career in team sports is characterized by specific components:

- the duration of the sports career, which can last up to 35 years;
- specific conditions of the competition depending on the season (winter and summer); e.g. rugby, field hockey, football, and baseball are sports that require adaptation of the athlete to the specific conditions;
- relatively later period of entering the professional level, compared to other sports (eg gymnastics);
- predominantly collective nature of performance in competitions.

Maintaining adequate sports motivation is a great challenge for coaches and athletes in this context. Success in individual sports depends on the athlete and the coach, while in team sports, success results from the entire team's efforts. On the other hand, coaches have the ultimate responsibility regarding the motivational aspects of the team as well as the performance of the athletes. Therefore, their decisions, actions, and behavior play an important role and influence each athlete and the entire team. How coaches construct the social environment, provide instruction and guidance during the training-competition process, and set goals affect team motivation and perceptions of success.

2.2. Achievement goal orientation

In the field of sports psychology, athletes' sport-related goal orientations are associated with a wide range of behaviors, cognitions, and attitudes related to sports performance. It is assumed to be a key factor for high athletic performance in team sports.

The theory distinguishes two main goal perspectives: task orientation and ego orientation. Combining the two-goal perspectives forms the goal orientation (Nicholls, 1989). Personal goals influence how people achieve success in sports performance situations.

Task orientation (task orientation) is determined as the result of improving sports skills, self-improvement, and team cooperation. A better opponent builds better abilities to improve. A goal-oriented task orientation is assumed to lead to positive and adaptive achievement-oriented behavior. Competitors with a high goal orientation to the task are persistent and willing to try new and exciting tasks to give their all for maximum personal expression. This type of orientation is associated with higher levels of enjoyment, more significant effort, and intrinsic interest in physical activity.

Goal orientation to the ego (ego orientation) is determined by comparing one's abilities with those of others. Competitors who seek victory at any cost demonstrate aggressive behavior on and off the sports field. The emphasis is on performance rather than development. The lack of long-term sports success leads to the cessation of competitive activity, which is expressed in the tendency of many young athletes to redirect sports activity to other fields. It is associated with lower levels of pre-competition confidence, as well as higher anxiety and worry during competitions.

Previous research has found consistent relationships between goal orientations and various psychological variables. More specifically, ego-goal orientation is positively related to approval of intentional injury to an opponent (Duda et al., 1991), worry about mistakes (Rogleva-Domuschieva, 2023a), unsportsmanlike behavior (Kavussanu and Roberts, 2001), cheating (Ring and Kavussanu, 2018), higher competitive anxiety (Tomczak, et al., 2022), antisocial behavior towards teammates and opponents (Boardley and Kavussan, 2010), undesirable behavior, e.g., doping and aggression (Lochbaum, et al., 2016), fear of failure (Gómez-López, et al., 2019).

Task orientation is associated with high athletic performance (Perera, 2020), group cohesion (Grgantov, et al., 2012), collective effectiveness (Junior, et al., 2019), mental toughness (Alvarez et al., 2017), organization (Rogleva-Domuschieva, 2023 a), beliefs about the reasons for success (Duda and Nicholls 1992), values, responsibility, integrity and honesty (Berengüí, et al., 2022), satisfaction (Mitsova, 2020 a).

2.3. Motivational climate

The social environment and individual variables influence how people think, feel, and behave. The motivational climate is related to the subjective assessment of factors from the environment: the level of the competition, its subjective significance for the athlete, the requirements and expectations of the coach, the club's management, and significant others - relatives, friends, the public, the general public.

Two types of perceived motivational climate are distinguished - mastery-oriented and performance-oriented (Ames, 1992c; Duda, Balaguer, 2007; Ruiz et al., 2019; Castillo-Jiménez et al., 2022).

In the perceived motivational climate oriented to mastery (mastery-oriented climate), the assimilation and improvement of habits and skills, public recognition for efforts, and group goals and interests are highly valued. Mistakes are part of the learning and improvement process.

The perceived performance motivational climate (performance motivational climate) brings to the fore the comparison of individual abilities with the abilities of others - both opponents and teammates. Highly qualified competitors in the team are valued. The coach's efforts and instructions are aimed at them. Success or failure is associated with them; mistakes are punished.

2.4. Long-term motivation

Scientific research in the field of long-term motivation in sports psychology is relatively few. Most studies are in the area of academic motivation.

Managing and maintaining adequate motivation during training is one of the significant problems of sports psychology. The majority of coaches associate motivation problems mainly with competition. However, practice shows that most of the difficulties are related to managing and maintaining motivation and long-term goals during preparation and overall sports competition activity. The quality and effectiveness of this process largely determine the duration of the athlete's sports career and competitive performance (Iancheva, 2007).

Coaches usually set results-oriented and long-term goals like winning their league championship, and athletes set long-term goals like winning a medal at the Olympics. These long-term goals are very important to success as they provide coaches and athletes with direction and can sometimes act as dream goals.

The third paragraph of the theoretical analysis analyzes satisfaction with sports activities.

3. SATISFACTION WITH SPORTS ACTIVITIES

Satisfaction is seen as a significant aspect of engaging in sports activities (Tiggemann, Williamson, 2000; Ryan, Deci, 2007; Burns et al., 2021; Domuschieva-Rogleva, 2020). It is a positive affective state, which results from a cognitive assessment that what is received or experienced meets or exceeds specific personal standards. Satisfaction can be considered at different levels - from more general (e.g., life satisfaction) to more specific areas (e.g., athlete satisfaction, which may include body shape satisfaction, coach and leader satisfaction to particular aspects (e.g., achieving specific goals and making strategic decisions) (Baker et al., 2003; Drakou, 2006).

Athlete satisfaction is seen as a quality of life or an attitude to the organization and management of the team. It is necessary for sports participation and a successful and long career. Lack of it can lead to redirection of the athlete to other areas of activity, containing potential conditions for success and satisfaction (Riemer, Chelladurai, 1998; Adie et al., 2021).

Satisfaction from playing a sport is closely related to the athlete's subjective assessment of the benefits of this sport, which are related to several main areas: self-knowledge, life experience, physical and mental health, public recognition and social contacts, satisfaction and inner harmony, personal improvement (Ilieva, 1989, 2006; Naydenova, Ilieva, 2010).

P. Chelladurai and H. Riemer (1998) define athlete satisfaction as "a positive affective state resulting from a complex evaluation of the structures, processes, and outcomes associated with the sports experience" (Chelladurai & Riemer, 1998, p. 135).

Satisfaction in sports is studied through the components of its structure and, respectively, the factors determining them. Particular attention is paid to the leadership style of the coach, the conditions for preparation and participation in a competition, and the successes achieved in sports. It is effective in terms of the goals set by the athletes and the actual results achieved. The athlete's satisfaction level also reflects his attitude towards the sports team. In addition, it is related to the physical, psychological, and environmental aspects of sports activity.

CHAPTER TWO includes the research's hypotheses, purpose, tasks, object, subject, methods, and organization.

The theoretical analysis gives us reason to derive the following working **hypothesis**: we assume that goal orientation, motivational climate, long-term motivation, leadership style, group cohesion, and collective effectiveness influence satisfaction with sports activities among athletes practicing team sports.

The private hypotheses in the dissertation work are related to the following assumptions:

1.1. We assume differences in the studied psychological variables depending on the factors of gender, age, type of sport, sports experience, participation in different rank competitions, and ranking.

1.2. We assume interrelationships exist between the studied psychological indicators (goal orientation, motivational climate, long-term motivation, leadership style, collective effectiveness, group cohesion, and satisfaction). We hypothesize that task orientation, mastery-oriented motivational climate, long-term motivation, leadership style, collective efficacy, and group cohesion are positively associated with satisfaction with sports activity.

1.3. We hypothesize that an authoritarian leadership style, a performance-oriented motivational climate, and an ego-goal orientation reduce satisfaction with sports activity.

1.4. We hypothesize mastery-oriented motivational climate, goal-oriented task orientation, long-term motivation, coach's leadership style, collective efficacy, and group cohesion enhance sports satisfaction in team sport athletes.

2. Purpose of the study

The purpose of the present study is to reveal the interrelationships and interdependencies between goal orientation, motivational climate, long-term motivation, leadership style, group cohesion, collective effectiveness, and satisfaction with sports activity among the athletes studied, differentiated by gender, age, type of sport practiced, sports experience, ranking and participation in different rank competitions.

3. Tasks of the research

In order to achieve the set goal and verify the raised hypotheses, the empirical research is oriented toward solving the following main tasks:

3.1. To reveal the specific features in the manifestations of goal orientation, motivational climate, long-term motivation, leadership style, group cohesion, collective effectiveness, and satisfaction with sports activity;

3.2. To study the influence of the factors of gender, age, type of sport, sports experience, and ranking on the studied psychological indicators.

3.3. To analyze the interrelationships and interdependencies between goal orientation, motivational climate, long-term motivation, leadership style, group cohesion, collective effectiveness, and satisfaction with sports activity among the athletes studied.

3.4. To reveal the influence of goal orientation, motivational climate, long-term motivation, leadership style, group cohesion, and collective effectiveness on satisfaction with sports activity.

4. Object and subject of the research

The object of research is 365 Bulgarian athletes, representatives of the following sports: basketball, volleyball, football, handball, rugby, field hockey, and baseball. The average age of all examined persons was 18.64 ± 5.4 years. For the purposes of the present study, the athletes are differentiated into groups depending on gender, age, type of sport, sports experience, ranking, and participation in different ranked competitions (Table 1).

Table 1. Researched persons differentiated by gender, age, type of sport, sports experience, ranking, and participation in different ranked competitions

Gender	Women	163
	Men	193
Age	14–19 years	206
	20–35 years	150
Type of sport	Basketball	39
	Volleyball	77
	Football	132
	Handball	36
	Rugby	32
	Hockey grass	26
	Baseball	14
Sports experience	up to 3 years	39
	4–5 years	70
	6–10 years	160
	over ten years	87
Ranking	I-III place	173
	after III place	183
Participation in different ranked competitions	National championships	230
	European Championships	93
	World Championships	33

The subject of the study is the psychological variables:

- goal orientation;
- motivational climate;
- long-term motivation;
- leadership style;
- group cohesion;
- collective efficiency and
- satisfaction with sports activity.

5. Методи на изследване

The following **methods** were used to achieve the goal and tasks of the present study:

- theoretical analysis;
- a psychodiagnostic experiment, realized through a set of test methods for measuring the relevant indicators;
- mathematical and statistical methods.

To achieve the research goals and to solve the previously formulated tasks, a complex methodology was used, which includes:

1. Task and Ego Orientation in Sport Questionnaire (Task and Ego Orientation in Sport Questionnaire - TEOSQ), developed by Duda and Nicholls (1992), adapted for Bulgarian conditions (Domuschieva-Rogleva, 2003). The scale contains 13 items divided into two scales:

- **task orientation** (7 items) is related to mastery, personal improvement, serious work, and cooperation in the team.
- **ego orientation** (6 items) is related to comparing one's abilities with the abilities of others.

They are rated on a five-point Likert-type scale, ranging from (1) strongly disagree to (5) strongly agree.

2. Perceived Motivational Climate in Sport Questionnaire- 2 (Perceived Motivational Climate in Sport Questionnaire- 2 (PMCSQ-2)) (Newton, Duda & Yin, 2000), adapted for Bulgarian conditions by (Domuschieva-Rogleva, 2007). The scale contains 33 items divided into two scales assessing mastery-oriented and performance-oriented motivational climates, each containing three subscales.

The mastery-oriented motivational climate is determined by 17 questions distributed in the following subscales:

- significance of the role (7 items);
- effort/improvement усилия/ (6 items);
- cooperative learning (4 items).

The performance-oriented motivational climate is determined by 16 items that form the subscales:

- unequal recognition (7 items);
- punishment for mistakes (4 items);
- Intra-team member rivalry (4 items).

A 5-point Likert-style scale from (1) strongly disagree to (5) strongly agree is used for assessment.

3. Test for the study of long-term motivation (Radoslavova, Velichkov, 2005), which evaluates the motivational attitude towards specific events and relationships in everyday life. It consists of 10 items and a 7-point Likert-type scale for a rating of 1

(very rarely) to 7 (very often) (eg: “How often do you feel that what you do every day is pointless...”).

4. Leadership Scale for Sport – LSS (Chelladurai & Saleh, 1980), adapted to Bulgarian conditions (Fenerova, Tosheva, Georgiev, 2011). The questionnaire contains 46 items and five subscales:

- **training and instructions** (10 items) – is associated with an increase in sports-technical mastery of athletes; strenuous, hard training; revealing the methods and tactics in sports; structuring and coordinating the actions of team members;

- **democratic behavior** (7 items) – refers to the participation of athletes in making decisions related to the work of the team with the methods of preparation, in determining the strategies and tactics of the game;

- **authoritarian behavior** (6 items) – describes independent, independent decision-making and emphasis on personal power;

- **social support** (7 items) – concern for the well-being of each member of the team, for the psychological climate and interpersonal relations in the team;

- **positive feedback** (7 items) – timely positive reinforcement of athletes' achievements.

A 5-point Likert-type scale from (1) never to (5) always is used for evaluation.

5. Collective efficacy questionnaire in sport (CEQS – Collective efficacy questionnaire in sport) developed by (Short, Sullivan, and Feltz, 2005) and adapted for Bulgarian conditions by (Yancheva and colleagues, 2012). The test was constructed to measure competitors' team performance expectations during competition. It contains 49 questions divided into five subscales.

- **abilities** (eg: "To show more skill than the opponent");

- **unity** (eg: "To keep the good atmosphere in the team");

- **persistence** (eg: "Coping under pressure");

- **preparation** (eg: "To prepare mentally for the competition");

- **effort** (e.g., "To demonstrate a strong desire to work and discipline").

A modified 5-point Likert-type scale from 1 (never) to 5 (always) is used for assessment. Higher scores reveal stronger perceptions of collective effectiveness among team members.

6. Group Environment Questionnaire (cohesion) - Group Environment Questionnaire (GEQ), developed by Carron and colleagues (1985), adapted for Bulgarian conditions by Yancheva and Iskrov (2010). The test is designed to establish the levels of cohesion in a given team. It contains 18 questions divided into four categories.

- **Individual Attractions to Group-Task** (ATG-T) 4 items – everyone in the team feels the same feelings towards the others, feels closeness and attachment to the team as a whole, and to the performance of the group task. (eg: "I like our team's style of play");

- **Individual Attractions to Group-Social** (ATG-S), five items - each individual in the team feels the same feelings as the others, feels closeness and attachment to the group as his social unit (eg: "Some of my best friends are part of the team.");

- **Group Integration-Task** (GI-T), five items – refers to the commitment to the team and the fulfillment of the tasks, goals, aspirations, and contradictions of the group as a whole. (eg: "Our team is united by the idea of finding a better way to implement.");

- **Group Integration-Social** (GI-S), four items - the extent to which individual team members feel accepted into the team and to what extent they interact with other members. (eg: "Our team members don't stay together after practice or off the field").

In the present study, we used a modified version of the Likert-type (5-point) rating scale from 1 (strongly agree) to 5 (strongly disagree). Higher scores reveal stronger perceptions of cohesion among team members.

7. Athlete Satisfaction Questionnaire – Athlete Satisfaction Questionnaire – ASQ (Riemer & Chelladurai, 1998), adapted for Bulgarian conditions by Georgiev et al. (2011). The questionnaire was designed to determine the satisfaction levels in a given team. The total number of items of the methodology is 14, divided into four subscales:

- **training and instruction (satisfaction)** (3 items) – is determined by items related to satisfaction with the training and instructions of the coach;

The satisfaction survey scale matches the training and instruction leadership style subscale name, so in the satisfaction survey methodology, the subscale is renamed training and instruction (satisfaction).

- **team performance** (3 items) – characterizes satisfaction with the overall work of the team, with the goals achieved, and with the pursuit of continuous improvement;

- **individual performance** (3 items) – refers to satisfaction with personal work, improvement, and achieved personal goals);

– **personal treatment** (5 items) – includes items related to satisfaction with social support and positive feedback).

Two of the subscales reflect satisfaction with the training process, and the other two reflect satisfaction with achievement. Each item is assessed using a 4-point Likert-type scale from 1 (not at all satisfied) to 4 (completely satisfied).

Organization of the study

The organization and conduct of the research went through the following stages:

Stage I of the study: (September – October 2021) 101 athletes were examined at this stage. The study was discontinued due to the COVID-19 pandemic.

II stage of the study: (April – June 2022) 264 athletes were examined at this stage.

The studies were conducted in the field during the athletes' training process before or after training.

THE THIRD CHAPTER of the dissertation includes an analysis and interpretation of the results of the conducted psychological research on the investigated variables: goal orientation, motivational climate, long-term motivation, leadership style, group cohesion, collective effectiveness, and satisfaction with sports activity.

1. Goal orientation to achievement

The results of our research (Table 2) show that the **goal orientation** towards the task is the leading **among the individuals studied** ($M=4.31$; $SD=0.49$). In a sense, these results were expected and similar to the results of other studies (Lochwaum et al., 2016), wherein a historical review based on 189 studies in sports (1989 - 2016), the authors found that goal orientation to the task is dominant. Opposite are the results of Hadjiyankova and Iancheva (2021), which reveal that ego orientation predominates.

Table 2. Average values of the goal orientation of the studied persons overall and grouped by gender

Variables	Task orientation		Goal orientation	
	M	SD	M	SD
Athletes in the research	4,30	0,49	2,25	0,77
Women	4,33	0,50	2,05	0,78
Men	4,27	0,55	2,42	0,72

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

Ego orientation has lower values ($M=2.25$; $SD=0.77$) both in the studied persons in general and in all other groups. Similar results have been obtained in other studies (Duda, 1989; Duda & Nicholls, 1992; Mitsova, 2019).

The comparative analysis of the experimental data found that statistically significant differences were observed between the subjects grouped by **gender**. **Ego goal** orientation ($U=10901.500$; $p=0.000$) was statistically significantly more pronounced in men ($M=2.42$; $SD=0.72$) than in women ($M=2.05$; $SD=0.78$). These results are also confirmed in other studies (Mitsova, 2020 b; Eikena, 2022; Domuschieva-Rogleva, 2023 a). Such statistical differences were not observed in the studied persons, who were distributed by age, type of sport, sports experience, ranking, and participation in different rank competitions.

1.2. Motivational climate

The results show that the leading motivational climate **among the subjects in general** is the perceived **mastery-oriented** motivational climate ($M=4.28$; $SD=0.49$), while the perceived **performance-oriented** motivational climate has lower values ($M=2.78$; $SD=0.65$) (Table 8). Similar trends are found in other studies (Reinbotha & Duda., 2006; Ivancheva, 2017; Castro-Sánchez et al., 2018; Kapitanski, 2022).

Table 8. Average values of the motivational climate of the studied persons 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

Statistically significant differences were found in the studied persons, grouped by gender, age, type of sport, ranking, participation in different rank competitions, and sports experience.

Punishment for mistakes ($U=13201.000$; $p=0.009$) was statistically significantly higher in the female group than in the male group.

Both age groups revealed statistically significant differences on the subscales: effort/improvement ($U=12928.500$; $p=0.008$), punishment for mistakes ($U=12326.000$; $p=0.001$), and performance-oriented motivational climate ($U=13341.000$; $p=0.028$).

In the group between 20 and 35 years old, effort/improvement, punishment for mistakes made by the coach, and the motivational climate oriented towards performance were statistically less pronounced than in the group under 19.

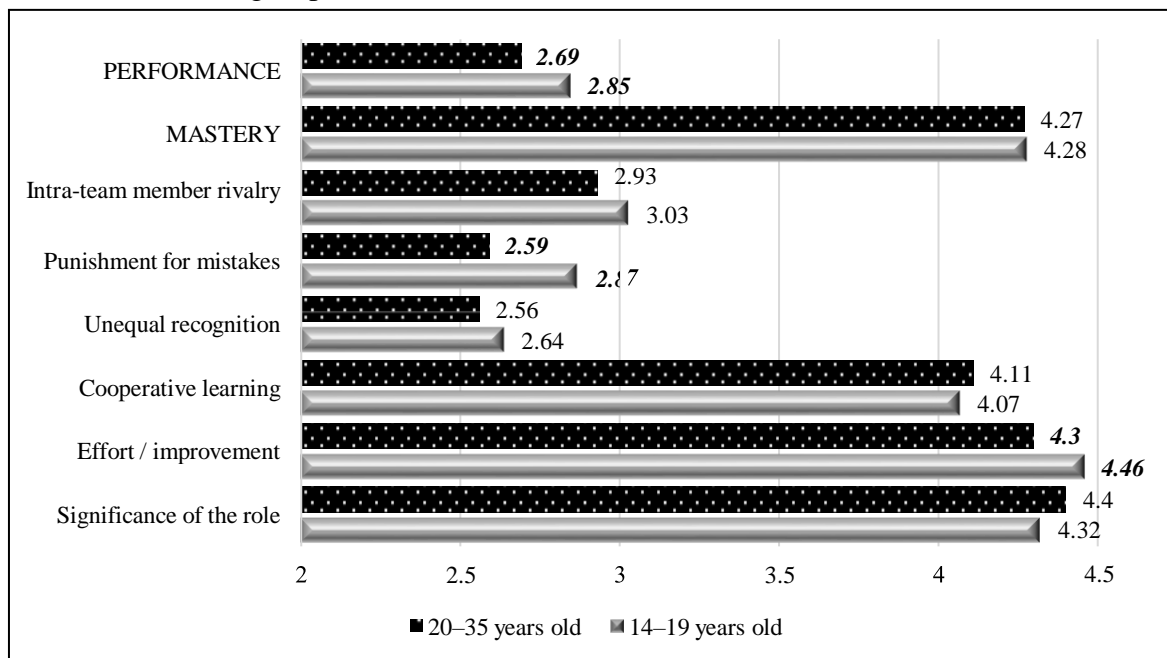


Figure 12. Average values of motivational climate by age

Athletes practicing team sports were found to have higher levels of mastery-oriented motivational climate and its subscales: significance of the role, effort/improvement, and cooperative learning, and lower levels of performance-oriented motivational climate and its subscales: unequal recognition, punishment for mistakes, and intra-team member rivalry (Table 10).

Table 10. Average values of the motivational climate according to the type of sport

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
Type of sport																
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	6,62	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

Numerous differences are observed among athletes grouped by sports disciplines (basketball, volleyball, soccer, handball, rugby, field hockey, and baseball). Statistically significant differences are revealed (Kruskal-Wallis test) on the components: mastery-oriented motivational climate ($H=14.659$; $p<0.023$) and its subscales cooperative learning ($H=16.416$; $p<0.012$) significance of the role ($H=18.132$; $p<0.006$), performance-oriented motivational climate ($H=24.030$; $p<0.001$) and the punishment for mistakes subscale ($H=67.772$; $p<0.000$).

In the studied individuals, distributed according to **sports experience**, the mastery-oriented motivational climate dominates, and the performance-oriented motivational climate has lower values (Table 11).

Table 11. Average values of the motivational climate according to the sports experience

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
Sports experience																
up to 3 years	4,55	0,46	4,55	0,45	4,32	0,60	2,43	0,76	2,45	0,97	2,90	0,79	4,47	0,46	2,59	0,69
4–5 years	4,37	0,49	4,47	0,42	4,15	0,66	2,68	0,75	2,82	0,85	3,07	0,75	4,33	0,42	2,86	0,66
6–10 years	4,36	0,67	4,39	0,50	4,03	0,72	2,64	0,79	2,85	0,79	3,00	0,67	4,26	0,50	2,83	0,62
over ten years	4,24	0,55	4,27	0,59	4,03	0,61	2,56	0,72	2,67	0,72	2,93	0,68	4,18	0,50	2,72	0,66

It is necessary to pay attention to the values of the motivational climate, oriented mastery, and its components among the athletes with sports experience of up to three years, which are the highest compared to the other studied groups. For the individual groups, the results are impressive, showing that with increasing sports experience, mastery-oriented motivational climate, and its subscales, the significance of the role, effort/improvement, and cooperative learning decrease.

The performance-oriented motivational climate, together with the subscales: unequal recognition, punishment for mistakes, and intra-team member rivalry, had higher results in the group with 4 to 5 years of sports experience, while in the athletes with up to 3 years of sports experience, the values are the lowest.

The results of the comparative analysis (Kruskal-Wallis test) show that there are statistically significant differences regarding the mastery-oriented motivational climate ($H=10.543$; $p<0.014$) and the two subscales: significance of the role ($H=10.543$ $p<0.014$) and effort/ improvement ($H=9.581$; $p<0.022$). These results show that the mastery-oriented motivational climate and the subscales role significance and effort/improvement are significantly higher in the group with experience of up to 3 years compared to the other groups.

In the groups differentiated according to **ranking**, the mastery-oriented motivational climate dominates with similar trends in both studied groups (Table 12).

The values of the performance-oriented motivational climate ($M=2.84$; $SD=0.71$) and the subscales - unequal recognition ($M=2.67$; $SD=0.82$), punishment for mistakes ($M=2.86$; $SD=0.83$) and intra-team member rivalry ($M=3.00$; $SD=0.78$) were highest in the medalist group, while role significance was higher ($M=4.41$; $SD=0.63$) among those ranked after third place.

The comparative analysis revealed a statistically significant difference regarding the punishment for mistakes subscale ($U=13526,000$; $p=0.017$). In the prize-winner group, the punishment for mistakes was significantly more often applied by the trainers compared to the third-place finisher group.

Table 12. Average values of the motivational climate in the studied persons grouped according to the ranking

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
I-III place	4,30	0,55	4,39	0,51	4,13	0,62	2,67	0,82	2,86	0,83	3,00	0,78	4,27	0,48	2,84	0,71
after III place	4,41	0,63	4,39	0,51	4,04	0,72	2,55	0,70	2,65	0,85	2,98	0,62	4,28	0,49	2,73	0,58

Athletes who participated in European championships ($M=4.32$; $SD=0.53$) had the highest values regarding the mastery-oriented motivational climate, while participants in world championships ($M=4.25$; $SD=0.45$) and National championships ($M=4.26$; $SD=0.40$) have lower and close values. (Table 13).

Table 13. Average values of the motivational climate in the studied persons grouped according to the competitions

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
National	4,32	0,53	4,41	0,46	4,04	0,69	2,68	0,73	2,76	0,85	3,05	0,66	4,26	0,47	2,83	0,62
European	4,44	0,72	4,35	0,61	4,18	0,66	2,42	0,83	2,63	0,83	2,80	0,79	4,32	0,53	2,62	0,70
World	4,32	0,56	4,37	0,48	4,12	0,56	2,65	0,70	3,03	0,80	3,06	0,63	4,27	0,46	2,91	0,63

The performance-oriented motivational climate was highest among participants in world championships ($M=2.91$; $SD=0.63$), followed by athletes participating in national ($M=4.25$; $SD=0.45$), and in last place are the participants in European championships ($M=2.62$; $SD=0.70$).

In all three **groups** (National, European, and World Championships), statistically significant differences (Kruskal-Wallis test) were found regarding the subscales of unfair recognition ($H=8.366$; $p<0.015$) and intragroup rivalry ($H=8.363$; $p<0.015$), characterizing the performance-oriented motivational climate.

I.3. Long-term motivation

The data obtained from this study show that the average value of long-term motivation in the studied athletes as a whole is $M=5.36$ ($SD=0.84$) (Figure 17). These results are higher than other studies (Ivancheva, 2017; Savcheva, 2021). We assume that the high levels of long-term motivation in the studied athletes are due to the age of maximum achievement, since in team sports, athletes have a long sports career that requires maintaining adequate motivation and setting long-term goals for successful competitive achievement.

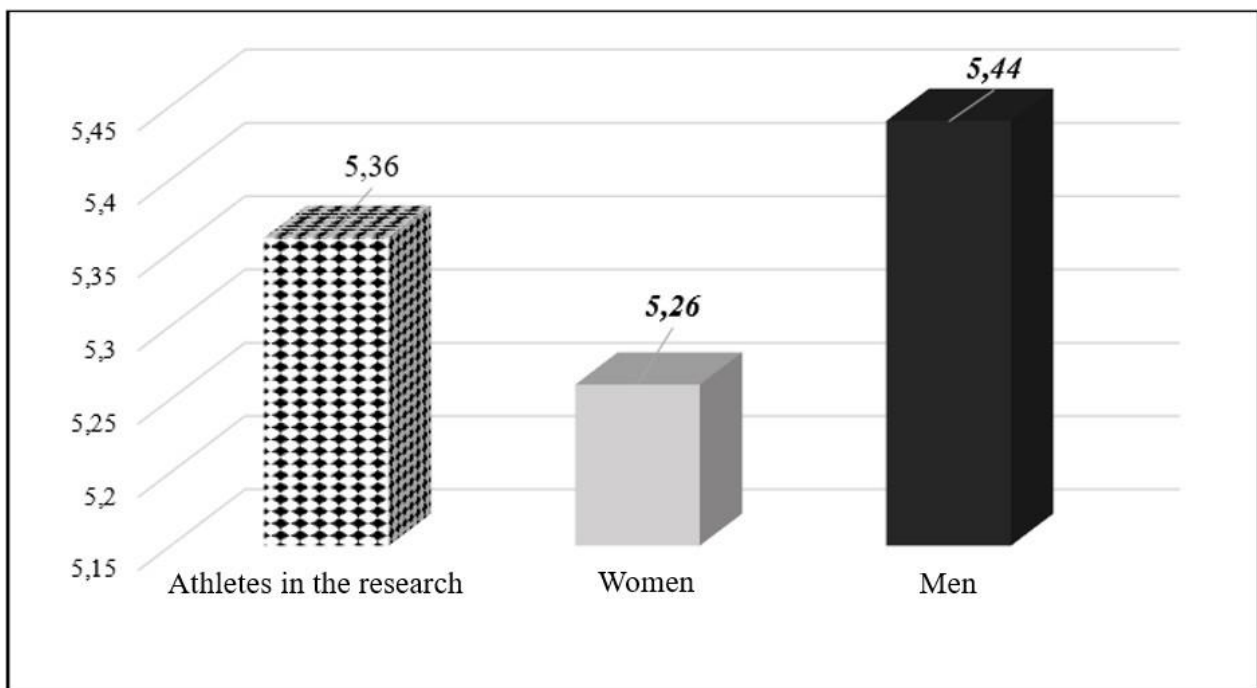


Figure 17. Average values of the long-term motivation of the studied persons overall and grouped by gender

The results of the comparative analysis show that statistically significant differences by gender and type of sport were revealed between the studied groups. Such differences were not found in the studied persons, distributed by age, sports experience, ranking, and participation in competitions of different ranks.

The results of the comparative analysis by **gender** showed that statistically significant differences were revealed between the two groups ($U=13750,000$; $p=0.041$). In **men**, the levels of long-term motivation were statistically significantly higher ($M=5.44$; $SD=0.82$) compared to the group of **women** ($M=5.36$; $SD=0.84$).

Among the athletes, differentiated according to **the type of sport practiced**, the highest levels of long-term motivation were found among the athletes practicing baseball ($M=6.11$; $SD=0.44$), handball ($M=5.62$; $SD=0.89$), rugby ($M=5.59$; $SD=0.92$), volleyball ($M=5.32$; $SD=0.84$), football ($M=5.32$; $SD=0.77$), while the lowest values are field hockey ($M=5.16$; $SD=0.96$) and basketball ($M=5.02$; $SD=0.93$) players (Figure 20).

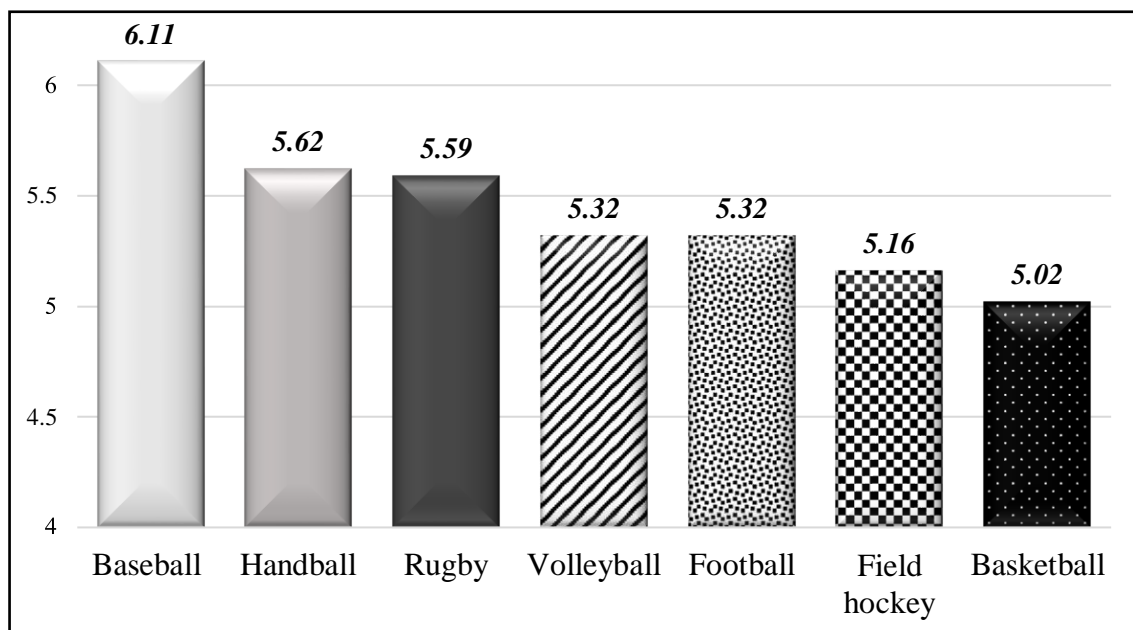


Figure 20. Average values of long-term motivation according to the type of sport

The comparative analysis revealed statistically significant differences regarding long-term motivation ($H=24.030$; $p<0.000$) (Kruskal-Wallis H test). The results in this context show that athletes practicing handball, rugby, and baseball have statistically significantly higher long-term motivation levels than athletes practicing volleyball, football, and field hockey.

1.4. Leadership style

The data obtained from the study show that **for the studied persons in general**, the subscales of training and instructions ($M=4.20$; $SD=0.63$) and positive feedback ($M=3.88$; $SD=0.68$) are leading. Similar trends have been found in other studies (Iancheva & Prodanov, 2019; Calvo & Topa, 2019; Kapitanski, 2022).

Authoritarian behavior had the lowest values ($M=2.56$; $SD=0.88$) (Table 20). These results are confirmed in other studies (Iskrov, 2016).

Table 20. Average values of the leadership style of the studied persons overall and grouped by gender

Variables	Training and instruction		Democratic behavior		Autocratic behavior		Social support		Positive feedback	
	M	SD	M	SD	M	SD	M	SD	M	SD
Athletes in the research	4,20	0,63	3,48	0,77	2,56	0,88	3,72	0,76	3,88	0,68
Women	4,22	0,78	3,37	0,78	2,43	0,82	3,74	0,78	3,80	0,71
Men	4,18	0,62	3,57	0,76	2,67	0,91	3,70	0,75	3,95	0,65

The comparative analysis reveals statistically significant differences in the following factors: gender, age, type of sport practiced, and participation in competitions of different ranks. There are no differences in sports experience and ranking.

Statistically significant differences were observed in the subjects grouped by **gender** regarding the subscales: democratic style ($U=13271.500$; $p=0.011$), authoritarian style ($U=13058.000$; $p=0.006$), and positive feedback ($U=13838.500$; $p=0.050$). In the **men's** group, authoritarian style, democratic style, and positive feedback from the coaches were applied significantly more often than in the **women's** group.

In the first age group between 14 and 19 years, coaches more often gave instructions and guidance during the training-competition process ($M=4.26$; $SD=0.56$), social support ($M=3.80$; $SD=0.74$) and positive feedback ($M=3.92$; $SD=0.65$) of the younger athletes, while in the second group between 20 and 35 years, coaches more often apply democratic ($M=3.49$; $SD=0.80$) and authoritarian ($M=2.61$; $SD=0.90$) leadership style (Figure 25).

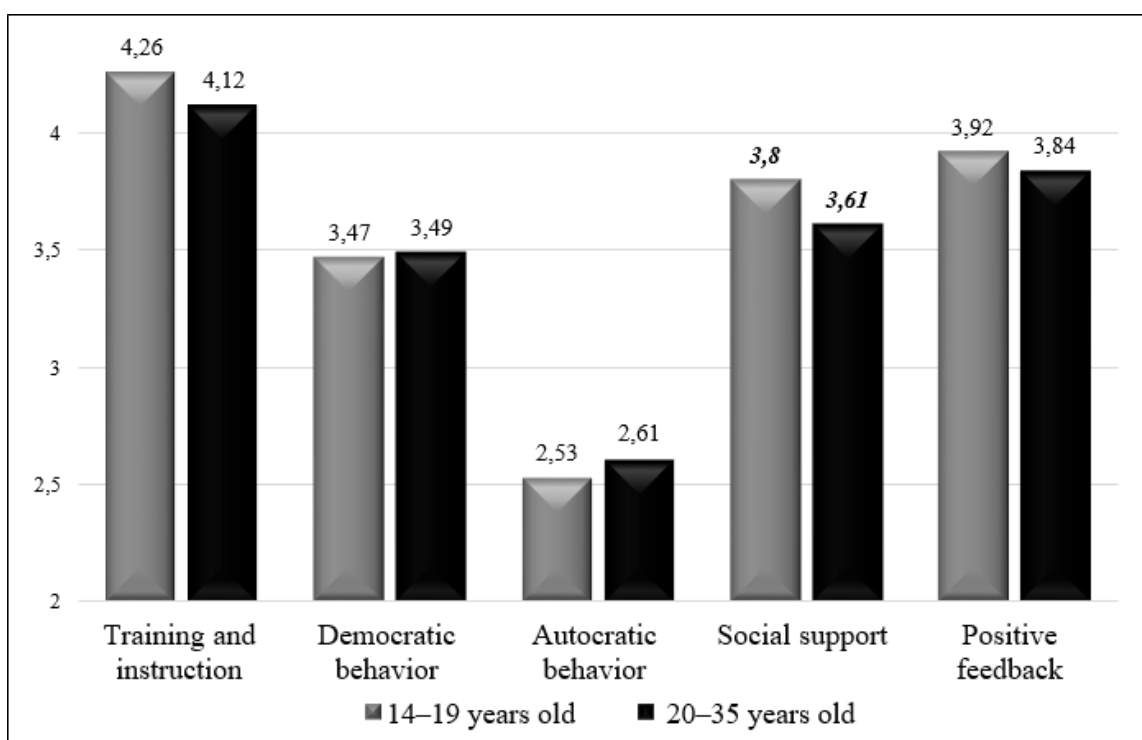


Figure 25. Average values of leadership style according to age

In the subjects studied, grouped by **sports disciplines**, **baseball** coaches most often structured the activity through training and instructions ($M=4.52$; $SD=0.24$), gave positive feedback ($M=4.34$; $SD=0.99$), but also least frequently applied an authoritarian style ($M=2.13$; $SD=0.79$) and provided social support ($M=3.16$; $SD=0.36$) (Table 22).

Table 22. Average values of leadership style according to the type of sport

Variables	Training and instruction		Democratic behavior		Autocratic behavior		Social support		Positive feedback	
	M	SD	M	SD	M	SD	M	SD	M	SD
Type of sport										
Volleyball	4,26	0,48	3,37	0,74	2,39	0,75	3,85	0,72	3,86	0,60
Basketball	4,21	0,43	3,31	0,59	2,50	0,63	3,53	0,67	3,90	0,56
Football	4,23	0,59	3,44	0,83	2,56	0,95	3,67	0,81	3,84	0,73
Handball	4,24	0,53	3,83	0,59	2,70	0,73	3,85	0,60	3,97	0,58
Rugby	4,10	0,83	3,96	0,70	3,00	1,23	4,09	0,59	4,04	0,58
Field hockey	3,76	1,09	3,24	0,87	2,66	0,68	3,50	1,04	3,59	0,99
Baseball	4,52	0,24	3,27	0,45	2,13	0,79	3,16	0,36	4,34	0,33

Rugby coaches most often apply a democratic ($M=3.96$; $SD=0.70$) or authoritarian style ($M=3.00$; $SD=1.29$) and provide social support ($M=4.09$; $SD=0.59$).

Field hockey coaches were the least likely to implement a democratic ($M=3.24$; $SD=0.87$), authoritarian style ($M=2.66$; $SD=0.68$), and training and instruction ($M=3.76$; $SD=1.09$).

The presence of statistically significant differences (Kruskal-Wallis test) was found for three of the subscales characterizing the leadership style: democratic style ($H=6.158$; $p<0.000$), social support ($H=24.949$; $p<0.000$) and authoritarian style ($H=13.410$; $p<0.037$).

The results show that democratic leadership behavior is significantly more often applied by handball and rugby coaches than by volleyball, football, basketball, field hockey, and baseball coaches. Baseball and volleyball coaches were substantially less likely to use **authoritarian leadership behaviors** than basketball, handball, and rugby coaches. Volleyball, rugby, and handball players are significantly more likely to receive **social support** from their coaches than basketball, field hockey, and baseball players.

The comparative analysis of the studied groups, differentiated according to **participation in different ranked competitions**, found a significant difference in the positive feedback subscale ($H=7.455$; $p<0.024$) (Kruskal-Wallis test). Additional pairwise analysis (Mann-Whitney Test) reveals that athletes participating in National championships more often receive positive feedback from their coaches, compared to athletes competing in European championships ($U=9070.500$; $p=0.032$) and World championships ($U=2954.500$; $p=0.039$).

Although there are no statistically significant differences, it is necessary to note the trends in the individual components. In the group of athletes who participated in World championships, coaches most often structured the activity through training and instructions ($M=4.30$; $SD=0.51$) but also least frequently applied democratic ($M=3.25$; $SD=0.81$) and authoritarian style ($M=2.43$; $SD=0.70$) and social support ($M=3.64$; $SD=0.68$) (Figure 29).

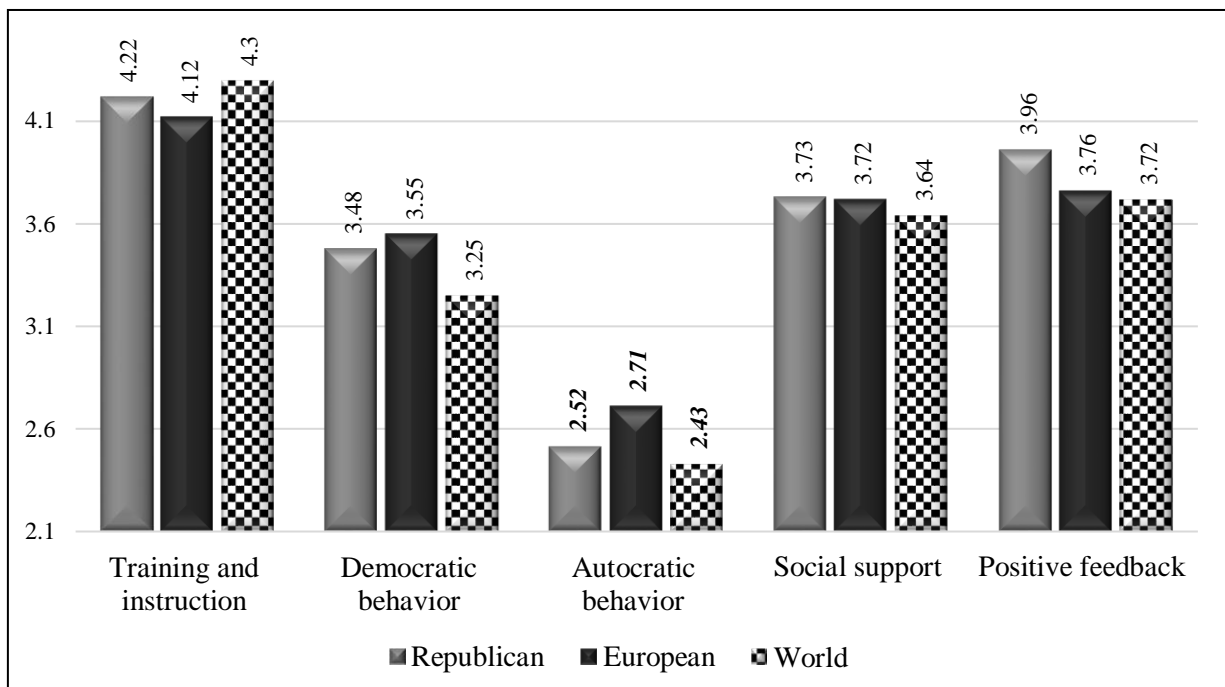


Figure 29. Average values of leadership style according to the competitions

Democratic ($M=3.55$; $SD=0.79$) and authoritarian ($M=2.71$; $SD=0.98$) leadership behaviors were most often applied by athletes who participated in European championships, while participants in National championships ($M=3.74$; $SD=0.74$) most often received social support from their coaches.

1.5. Collective efficiency

The results of the study on the collective efficiency of **the subjects in general** show that the highest mean values were effort ($M=4.10$; $SD=0.63$), followed by persistence ($M=4.06$; $SD=0.69$), unity ($M=3.95$; $SD=0.73$) while for preparation ($M=3.91$; $SD=0.72$) and abilities ($M=3.85$; $SD=0.70$) the values are the lowest (Figure 30). Similar trends were found in other studies (Iancheva, Iskrov, 2011; Yordanov, 2012; Iskrov, 2016). The collective efficiency (total) indicated high levels of collective efficacy ($M=3.97$; $SD=0.63$).

The results of the comparative analysis revealed statistically significant differences in terms of age, type of sport practiced, ranking, and participation in competitions of different ranks.

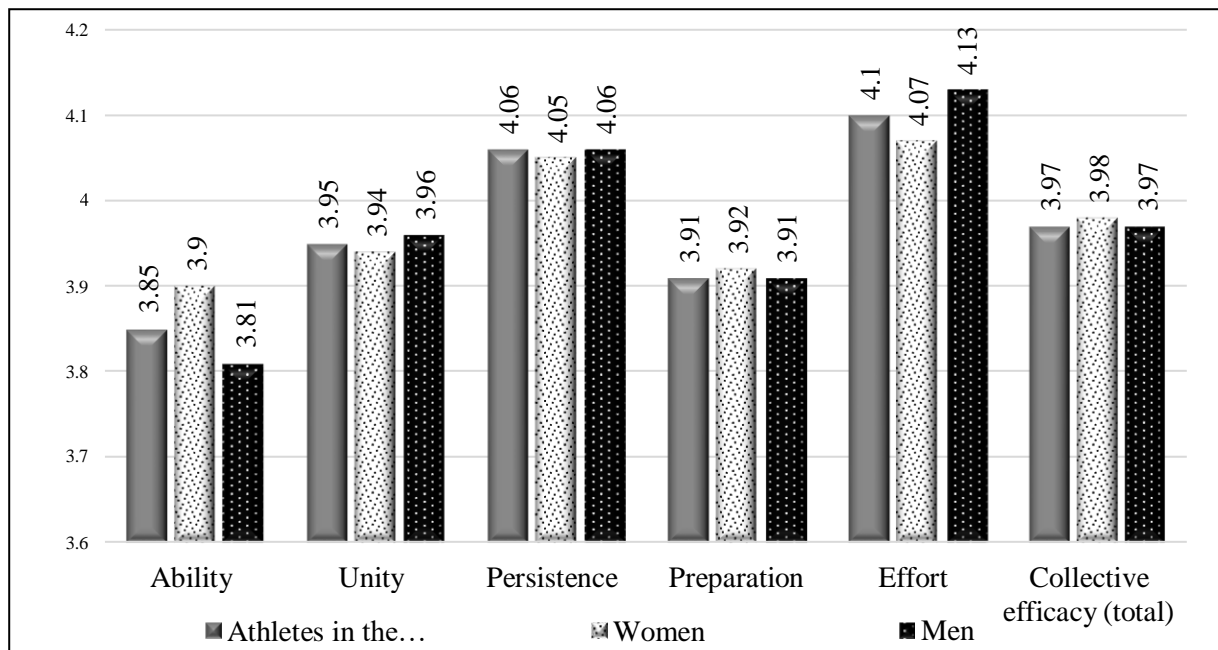


Figure 30. Average values of collective efficacy of the studied persons overall and grouped by gender

The **gender** factor does not significantly affect athletes' expectations of collective effectiveness either. These results are also confirmed in other studies (Iancheva et al., 2012; Iskrov, 2016; Yordanov, 2022).

In the **age aspect**, the preparation is statistically significantly more pronounced in the first group between 14 and 19 years ($U=12854.500$; $p=0.006$), compared to the second group between 20 and 35 years. These results show that younger athletes put in more physical and mental effort and show more opponent skills to cope under pressure than older athletes.

The subscale collective efficacy (total) shows that the first group between 14 and 19 years of age has higher values ($M=4.01$; $SD=0.63$) compared to the second group from 20 to 35 years of age ($M=3.93$; $SD=0.93$).

The subscales unity, persistence, and effort have similar values in both groups, while preparation ($M=4.00$; $SD=0.69$) and abilities ($M=3.89$; $SD=0.72$) are higher in the group of younger athletes from 14 to 19 years (Figure 31).

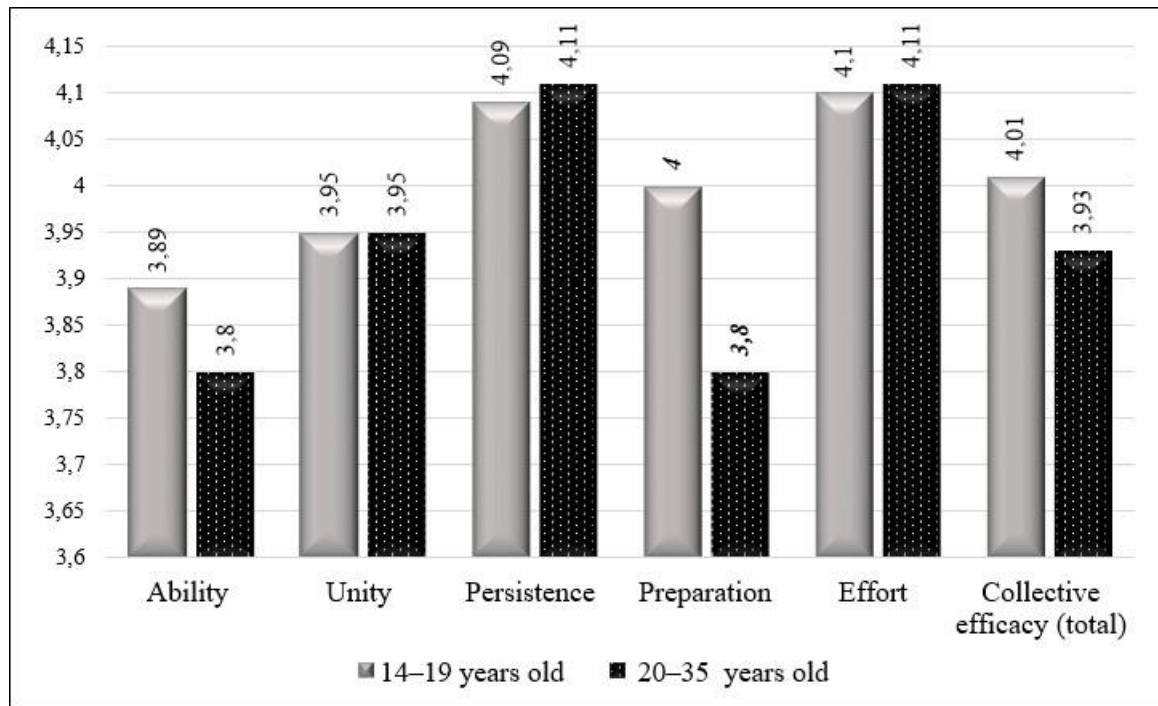


Figure 31. Average values of collective efficacy according to age

For the individuals studied, grouped by **sports disciplines**, for the generalized collective efficiency scale, the highest results were found for rugby players ($M=4.08$; $SD=0.62$) and handball players ($M=4.08$; $SD=0.64$), followed by volleyball players ($M=4.00$; $SD=0.56$), soccer players ($M=3.97$; $SD=0.65$), baseball players ($M=3.96$; $SD=0.26$), hockey players on field ($M=3.88$; $SD=0.80$) and the basketball players were in last place ($M=3.81$; $SD=0.64$) (Table 28).

In individual components, the abilities are higher in athletes practicing volleyball, handball, rugby, and field hockey than in baseball players. Unity and persistence are higher in baseball players than in field hockey and basketball. Rugby and soccer players put more effort into their training and competition activities than volleyball and basketball players. In the studied groups of athletes, the comparative analysis shows that there are statistically significant differences (Kruskal-Wallis test) in terms of preparation ($H=13.130$; $p<0.041$).

Table 28. Average values of collective efficacy according to the type of sport

Variables	Ability		Unity		Persistence		Preparation		Effort		Collective efficacy (total)	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Type of sport												
Volleyball	3,95	0,63	3,91	0,67	4,06	0,60	4,08	0,60	4,02	0,62	4,00	0,56
Basketball	3,74	0,77	3,81	0,76	3,85	0,66	3,68	0,66	3,98	0,72	3,81	0,64
Football	3,82	0,73	3,95	0,74	4,06	0,71	3,92	0,73	4,11	0,67	3,97	0,65
Handball	3,95	0,70	4,13	0,69	4,16	0,66	3,94	0,80	4,23	5,82	4,08	0,64
Rugby	3,94	0,62	4,07	0,78	4,16	0,76	3,95	0,83	4,28	0,49	4,08	0,62
Field hockey	3,81	0,87	3,74	0,84	3,95	0,88	3,81	0,88	4,11	0,86	3,88	0,80
Baseball	3,57	0,34	4,21	0,33	4,28	0,41	3,60	0,36	4,14	0,30	3,96	0,26

The comparative analysis shows the presence of the most significant differences in the groups differentiated according to the ranking. In the prize-winners group, expectations for collective efficacy were statistically significantly higher in terms of the subscales: abilities ($U=129575.500$; $p=0.003$), perseverance ($U=13072.000$; $p=0.036$), preparation ($U=13072.000$; $p=0.004$), effort ($U=13753.000$; $p=0.031$) collective efficacy (total) ($U=13318.500$; $p=0.010$), compared to athletes ranked after third place (Table 30).

Table 30. Average values of collective efficacy according to the ranking

Variables	Ability		Unity		Persistence		Preparation		Effort		Collective efficacy (total)	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Ranking												
I-III place	3,94	0,73	4,00	0,74	4,12	0,70	4,01	0,75	4,18	6,56	4,05	0,64
after III place	3,76	0,66	3,90	0,72	3,99	0,67	3,83	0,68	4,04	0,64	3,90	0,60

These results are expected because teams with higher levels of collective efficacy should perform better than teams with low levels of collective efficacy.

Participants in **European championships** show the highest values regarding the collective efficacy subscale ($M=4.07$; $SD=0.67$) and the four subscales: effort ($M=4.24$; $SD=0.58$), perseverance ($M=4.13$; $SD=0.75$), unity ($M=4.09$; $SD=0.79$) and preparation ($M=3.99$; $SD=0.80$). The values of the other groups that participated in national and world championships are lower (Table 31).

Between the competitors of **the three groups** (National, European, and World championships), there is a statistically significant difference (Kruskal-Wallis test) in terms of unity ($H=6.796$; $p<0.033$).

Table 31. Average values of collective efficacy according to the competitions

Variables	Ability		Unity		Persistence		Preparation		Effort		Collective efficacy (total)	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
National championships	3,80	0,71	3,89	0,72	4,03	0,68	3,88	0,68	4,05	0,69	3,93	0,62
European Championships	3,93	0,72	4,09	0,79	4,13	0,75	3,99	0,80	4,24	0,58	4,07	0,67
World Championships	3,98	0,61	3,98	0,54	4,06	0,51	3,92	0,74	4,09	0,48	4,01	0,48

The established significant differences between the athletes participating in competitions of different ranks suggest the application of additional comparative analysis in pairs (Mann-Whitney test) between the differences in rank competitions. The results show that unity ($U=8769,000$; $p=0.011$) is significantly higher in athletes participating in European championships than in athletes participating in National championships.

1.6. Group cohesion

The results of the variation analysis of group cohesion show that the subscale of individual attraction to the group-social activity ($M=3.73$; $SD=0.64$) is the leading one **among the individuals studied**, followed by group integration - task ($M=3,58$; $SD=0.56$), group integration - social activity and lastly individual attraction to the group - task ($M=3.40$; $SD=0.66$) (Figure 35).

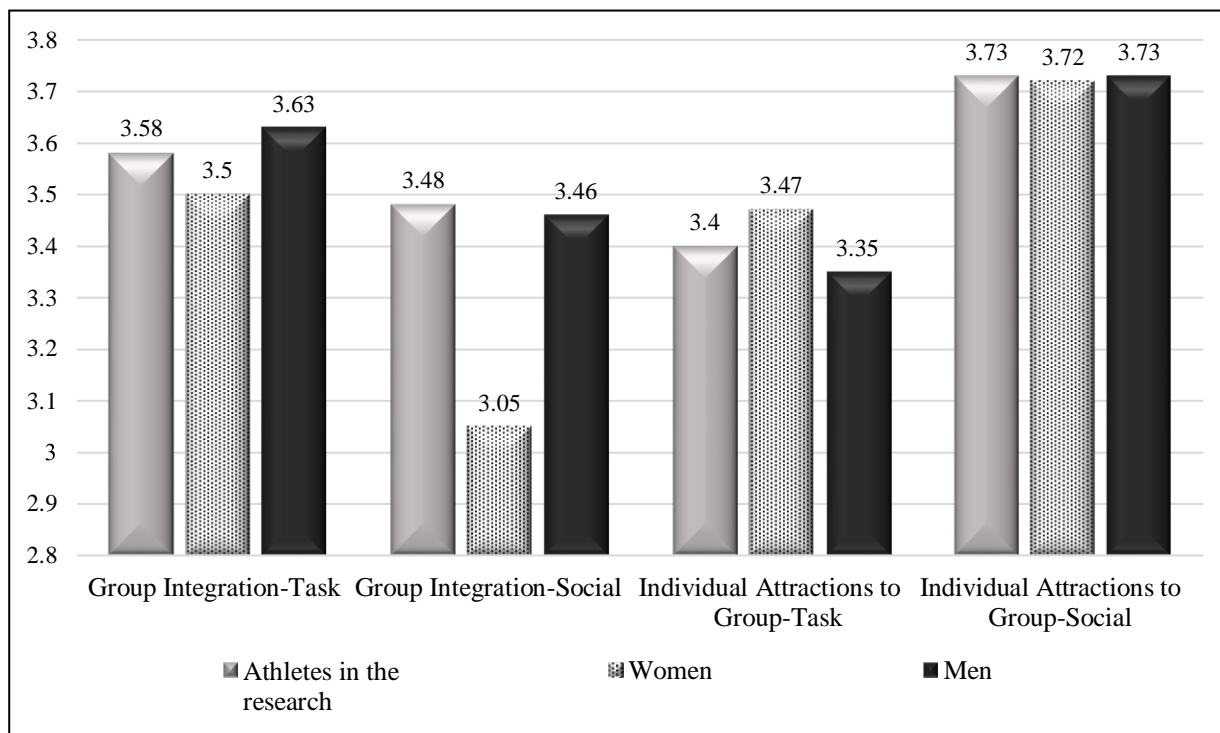


Figure 35. Average values of group cohesion of the studied persons overall and grouped by gender

The comparative analysis reveals statistically significant differences in the factors: age, type of sport practiced, and participation in competitions of different ranks. Such differences are not found in terms of gender, sports experience, and ranking.

In the studied persons, divided by **gender**, the subscale individual attraction to the group - a social activity with equal values in both groups - has the highest values. These results indicate that team members feel close and loyal to the team.

According to the individual components, in the group of **men** with higher values are the subscales: group integration - task (M=3.63; SD=0.56) and group integration - social activity (M=3.46; SD=0, 76), while individual attraction to the task group was higher in **women** (M=3.47; SD=0.62), but the results were not statistically significant.

In both **age groups**, statistically significant differences were found regarding the subscales: individual attraction to the group - social activity (U=12494.000; $p=0.000$) and individual attraction to the group - task (U=12857.500; $p=0.005$). These results show that individual attraction to the group is significantly higher in both dimensions (task and social activity), with social cohesion being higher in the under-19 group. In contrast, task cohesion is considerably higher in the competitors from the second group between 20 and 35 years of age (Table 33). The results from another survey (Iskrov, 2016) were different. The author found no statistically significant differences in the studied groups of youth and men.

Table 33. Average values of group cohesion according to age

Variables	Group Integration- Task		Group Integration- Social		Individual Attractions to Group- Task		Individual Attractions to Group- Social	
	M	SD	M	SD	M	SD	M	SD
14–19 years old	3,60	0,58	3,49	0,75	3,33	0,66	3,81	0,63
20–35 years old	3,54	0,52	3,46	0,77	3,50	0,66	3,61	0,63

The variation analysis in the studied groups, distributed according to the **type of sport**, shows that the individual attraction to the group-social activity (M=4.04; SD=0.43) and the individual attraction to the group-task (M=3.89; SD= 0.59) was highest among baseball athletes, while group integration - social activity (M=3.68; SD=0.77) was highest among handball players (Table 34).

The lowest values in the studied athletes are found in field hockey players, except the group integration subscale - a task (M=3.69; SD=0.65), which has the highest value compared to the other groups.

A statistically significant difference (Kruskal-Wallis test) was found in the subscale of individual attraction to the group task (H=27.028; $p=0.000$). The obtained results of the comparative analysis show that the individual attraction to the task group is significantly higher in baseball, rugby, and field hockey athletes compared to the other groups by type of sport.

Table 34. Average values of group cohesion according to the type of sport

Variables	Group Integration-Task		Group Integration-Social		Individual Attractions to Group-Task		Individual Attractions to Group-Social	
	M	SD	M	SD	M	SD	M	SD
Type of sport								
Volleyball	3,64	0,50	3,54	0,80	3,34	0,57	3,38	0,60
Basketball	3,36	0,51	3,57	0,76	3,37	0,54	3,73	0,73
Football	3,56	0,56	3,36	0,74	3,37	0,68	3,62	0,62
Handball	3,66	0,57	3,68	0,77	3,61	0,72	3,71	0,59
Rugby	3,58	0,63	3,62	0,84	3,53	0,80	3,71	0,68
Field hockey	3,69	0,65	3,25	0,67	3,07	0,60	3,70	0,69
Baseball	3,64	0,55	3,58	0,38	3,89	0,59	4,04	0,43

Regarding the remaining components, group integration-task performance was higher in volleyball, soccer, handball, and rugby than in basketball athletes. Group integration - social activity was lower in field hockey players compared to volleyball, handball, and rugby players. Individual attraction to group sports was higher in field hockey and baseball players than in soccer, but the results were not statistically significant.

In the studied individuals, grouped according to **participation in different ranked competitions**, it was found that the subscale individual attraction to the group-social activity had the highest values in the competitors participating in National (M=3.74; SD=0.64) and World (M=3.74; SD=0.52) championships with equal results (Table 37).

Athletes participating in World championships have the highest levels of group integration - task (M=3.73; SD=0.49) and individual attraction to the group - task (M=3.70; SD=0.50) while the group integration - social activity is highest among the competitors participating in European championships (M=3.63; SD=0.78).

Table 37. Average values of group cohesion according to the competitions

Variables	Group Integration-Task		Group Integration-Social		Individual Attractions to Group-Task		Individual Attractions to Group-Social	
	M	SD	M	SD	M	SD	M	SD
Competitions								
National Championships	3,59	0,55	3,42	0,76	3,29	0,66	3,74	0,64
European Championships	3,49	0,60	3,63	0,78	3,57	0,66	3,69	0,67
World Championships	3,73	0,49	3,46	0,62	3,70	0,50	3,74	0,52

The presence of a statistically significant difference (Kruskal-Wallis test) is established regarding the individual attraction to the group - task ($H=21.730$; $p<0.000$). Additional pairwise comparison analysis (Mann-Whitney test) revealed that individual attraction to the task group was

significantly higher in athletes participating in world championships compared to the first group (National championships) ($U=7809,000$; $p=0.000$) and the second group (European championships) ($U=2411.000$ $p=0.001$). These results indicate that individual attraction to group-task increases in athletes competing in higher-ranked events.

1.7. Satisfaction with sports activity

The obtained results of our research establish that for the individuals studied, in general, the leading components are training and instructions (satisfaction) ($M=3.28$; $SD=0.66$) and personal attitude of the coach to the athlete ($M=3.22$; $SD=0.67$). Similar trends have been found in other studies (Domuschieva-Rogleva & Yancheva, 2021; Mitsova, 2020). The other two components, individual performance ($M=3.13$; $SD=0.72$) and team performance ($M=3.05$; $SD=0.64$), had lower values (Table 38).

The comparative analysis reveals statistically significant differences in the factors: gender, type of sport practiced, ranking, and participation in competitions of different ranks. Such differences are not found in the factors of age and sports experience.

Table 38. Average values of satisfaction of the studied persons overall and grouped by gender.

Variables	Training and instruction (satisfaction)		Team performance		Individual performance		Personal treatment	
	M	SD	M	SD	M	SD	M	SD
Athletes in the research	3,28	0,66	2,97	0,74	3,13	0,72	3,22	0,67
Women	3,25	0,68	3,05	0,80	3,10	0,74	3,20	0,73
Men	3,30	0,64	2,90	0,64	3,15	0,70	3,23	0,62

In the **male** group with higher values were the satisfaction subscales: training and instruction (satisfaction) ($M=3.30$; $SD=0.64$), individual performance ($M=3.15$ $SD=0.70$), and personal treatment ($M=3.23$; $SD=0.62$), while team performance ($M=3.05$; $SD=0.80$) was more pronounced in **women**.

The comparative analysis of the experimental data shows the existence of statistically significant differences in terms of team performance ($U=13612,000$; $p=0.027$), and the group of women, the results are significantly higher compared to the men.

Athletes up to 19 years of age have higher levels of satisfaction on all subscales: training and instructions (satisfaction) ($M=3.32$; $SD=0.59$), personal attitude of the coach to the athlete ($M=3.26$; $SD=0.60$), individual performance ($M=3.17$; $SD=0.71$) and team performance ($M=3.01$; $SD=0.70$), compared to the group between 20 and 35 years old (Figure 41).

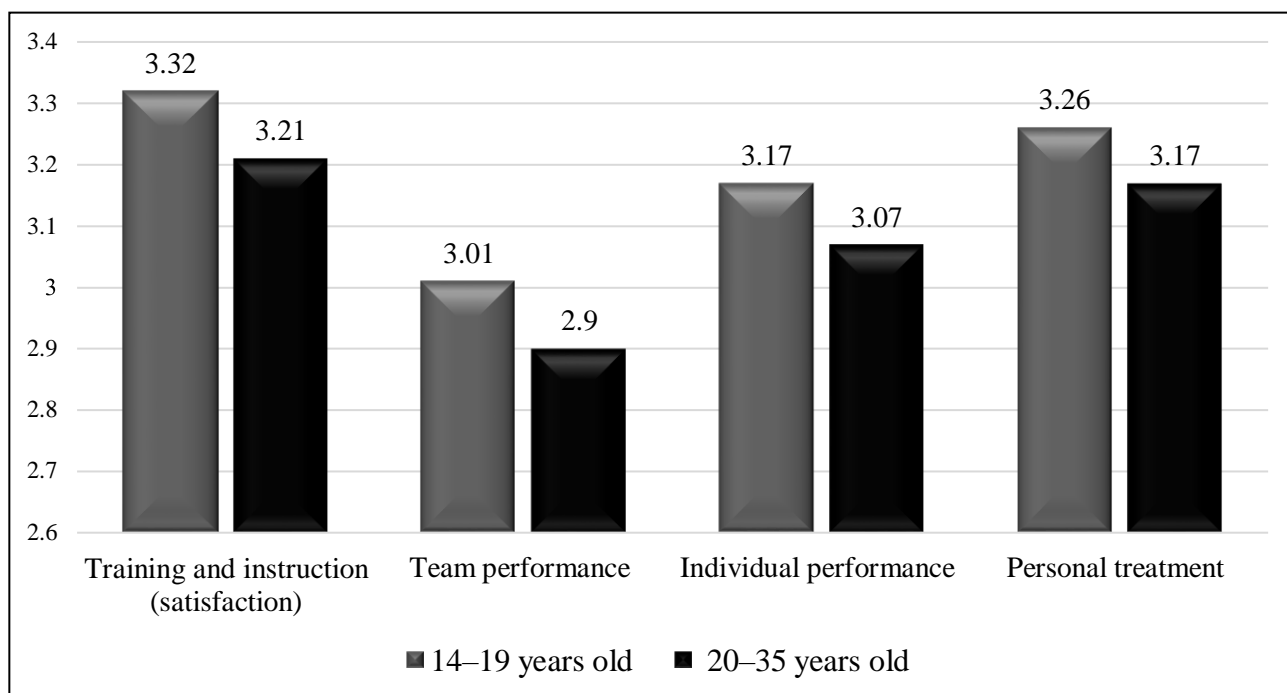


Figure 41. Average values of satisfaction according to age.

In the subjects grouped by **sports disciplines**, there are statistically significant differences (Kruskal-Wallis test) regarding the subscales: training and instructions (satisfaction) ($H=22.902$; $p<0.001$), team performance ($H=14.195$; $p<0.028$) and personal treatment ($H=18.126$; $p<0.006$) (Figure 42).

The established statistical differences between athletes practicing team sports suggest the application of additional comparative analysis in pairs (Mann-Whitney test). Our results show that satisfaction with team performance is significantly more pronounced among volleyball, soccer, handball, and field hockey athletes than among basketball and baseball athletes. Satisfaction with the coach's attitude towards the athlete is significantly higher among athletes practicing handball, baseball, and rugby than those practicing volleyball, soccer, basketball, and field hockey.

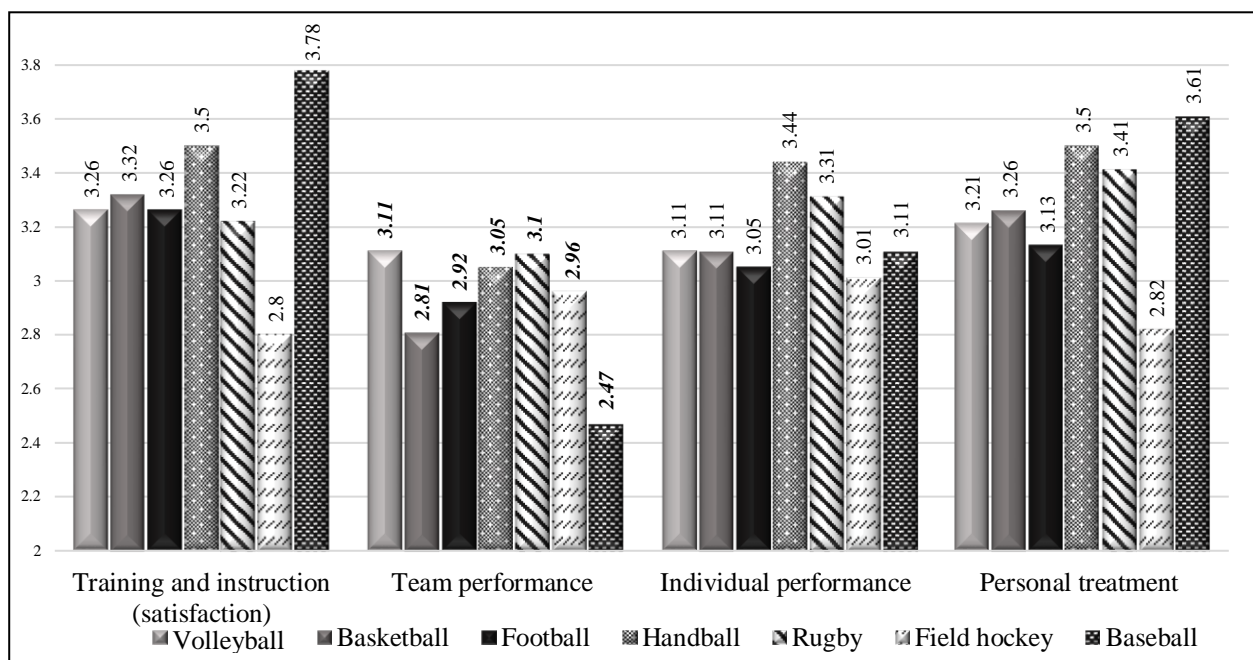


Figure 42. Average values of satisfaction according to sport.

In the groups specific according to **sports experience**, athletes with up to **3 years** of sports experience had the highest values regarding training and instruction (satisfaction) ($M=3.46$; $SD=0.60$) and the coach's attitude towards the athlete ($M=3.34$; $SD=0.64$), while team ($M=3.14$; $SD=0.68$) and individual performance ($M=3.25$; $SD=0.62$) had the highest values in the group with sports experience between 4 and 5 years.

Table 41. Average values of satisfaction according to the sports experience

Variables	Training and instruction (satisfaction)		Team performance		Individual performance		Personal treatment	
	M	SD	M	SD	M	SD	M	SD
up to 3 years	3,46	0,60	2,99	0,74	3,24	0,75	3,34	0,64
4–5 years	3,34	0,56	3,14	0,68	3,25	0,62	3,25	0,53
6–10 years	3,20	0,70	2,87	0,79	3,03	0,75	3,15	0,75
over ten years	3,29	0,67	2,99	0,67	3,18	0,71	3,26	0,65

The lowest values for all subscales are observed in the group with sports experience from 6 to 10 years.

In the groups of individuals studied, divided according to the **participation in different ranks of competitions**, it was found that the training and instructions subscale was leading with almost

equal values in the three groups, followed by the coach's attitude towards the athlete, individual performance and lastly - team performance (Table 42).

Between the three groups, statistically significant differences (Kruskal-Wallis test) were observed regarding team performance ($H=11.040$; $p<0.004$).

Table 42. Average values of satisfaction according to the competitions

Variables	Training and instruction (satisfaction)		Team performance		Individual performance		Personal treatment	
	M	SD	M	SD	M	SD	M	SD
Competitions								
National Championships	3,28	0,63	2,89	0,70	3,09	0,72	3,21	0,62
European Championships	3,27	0,76	3,17	0,79	3,26	0,70	3,27	0,82
World Championships	3,28	0,62	2,90	0,76	3,01	0,72	3,14	0,59

Additional pairwise comparison analysis (Mann-Whitney test) reveals that athletes participating in European championships are significantly more satisfied with team performance ($U=8207.500$; $p=0.001$) than the participants in national championships.

For athletes grouped by **ranking**, statistically significant differences were observed in terms of team performance ($U=12107.500$; $p=0.000$) and individual performance ($U=13417.000$; $p=0.012$).

In this study, it was found that among medalists, the values of all components of satisfaction with sports activity were higher, with the individual subscales with the highest values being training and instruction ($M=3.28$; $SD=0.62$), followed by the coach's personal attitude towards the athlete ($M=3.26$; $SD=0.64$), individual performance ($M=3.21$; $SD=0.72$), and lastly team performance ($M=3.12$; $SD=0.72$) (Table 43).

Table 43. Average values of satisfaction according to the ranking.

Variables	Training and instruction (satisfaction)		Team performance		Individual performance		Personal treatment	
	M	SD	M	SD	M	SD	M	SD
Ranking								
I-III place	3,28	0,62	3,12	0,72	3,21	0,72	3,26	0,64
after III place	3,27	0,70	2,82	0,73	3,05	0,71	3,19	0,71

In summary, the results of the comparative analysis between the groups of subjects revealed numerous statistically significant differences in almost all psychological variables studied (Figure 46).

Type of sport	Gender	Competitions	Age	Ranking	Sports experience
Motivational Climate	Goal orientation	Motivational Climate	Motivational Climate	Motivational Climate	Motivational Climate
Long-term motivation	Motivational Climate	Leadership style	Leadership style	Collective efficacy	
Leadership style	Long-term motivation	Group cohesion	Group cohesion	Satisfaction	
Group cohesion	Leadership style	Collective efficacy	Collective efficacy		
Collective efficacy	Satisfaction	Satisfaction			
Satisfaction					

Figure 46. Statistically significant differences found between different groups of athletes

In the groups differentiated according to the **type of sport**, the most significant differences were found in all the studied variables except goal orientation. The athletes grouped according to **sports experience** have the most minor differences in the studied factors.

2. CORRELATION ANALYSIS

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

Correlation analysis reveals multiple interdependencies and interrelationships between the psychological variables studied. **Positive relationships** are found between task orientation, mastery-oriented motivational climate and its subscales, long-term motivation, and leadership style components except authoritarian style, collective efficacy subscales, group cohesion, and satisfaction components. Ego-goal orientation, performance-oriented motivational climate with the three

subscales, and authoritarian leadership style were positively correlated with each other and **negatively** correlated with all other factors.

The correlation between the satisfaction components with sports activity and the other psychological variables studied is presented below.

Satisfaction with training and instruction and other psychological variables studied

The results of the correlation analysis between **satisfaction with the training and instructions** and the studied psychological variables revealed 25 dependencies, of which 18 were positive and seven negative (Figure 49).

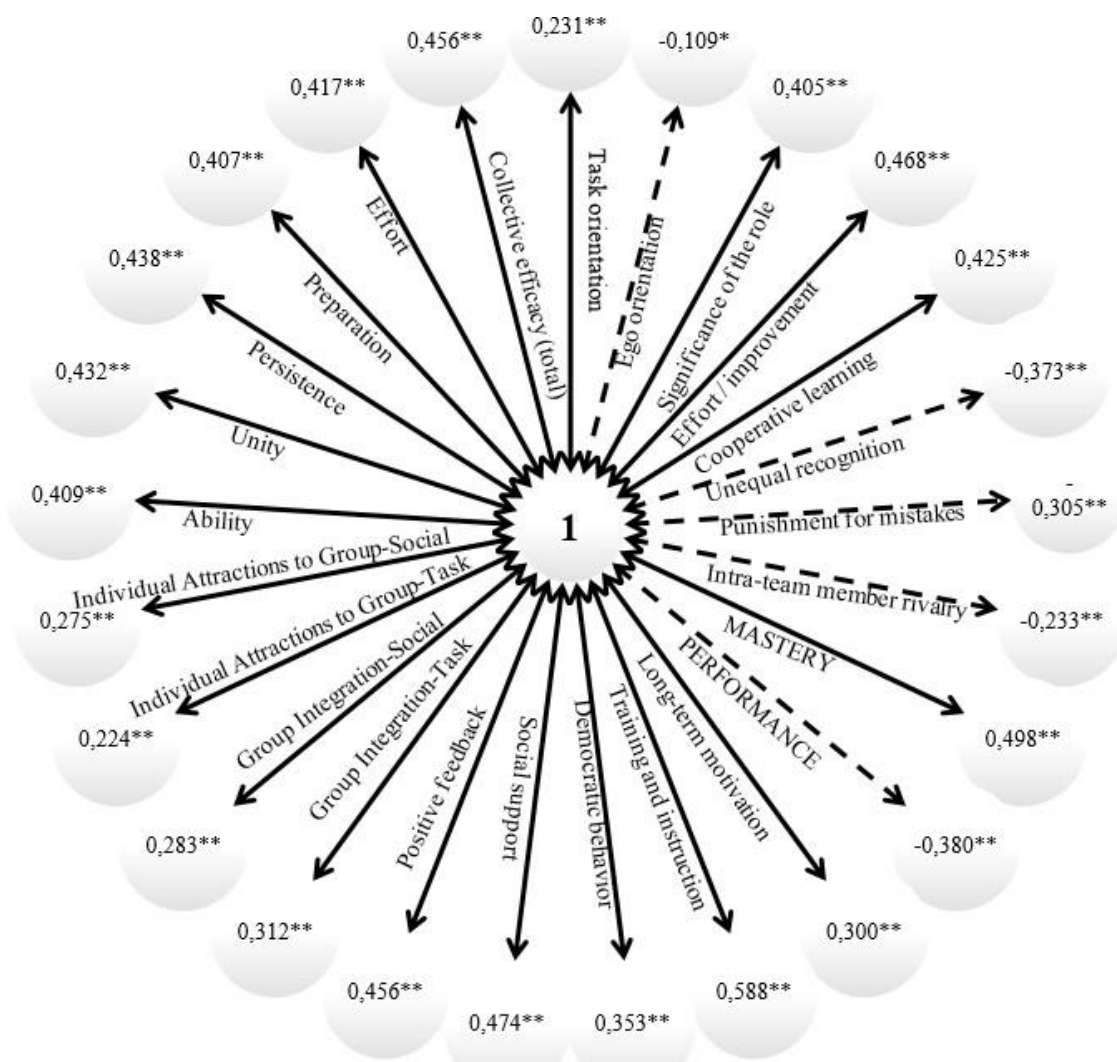


Figure 49. Interrelationships between satisfaction with training and instruction and the psychological variables studied

Direct correlation \longleftrightarrow Inverse correlation \dashrightarrow

Satisfaction with training and instruction was **positively** correlated with the variables: **goal orientation** to the task ($r=0.231$; $p=0.01$), mastery-oriented **motivational climate** ($r=0.489$; $p=0.01$) with the subscales – significance of the role ($r=0.405$; $p=0.01$); effort/improvement ($r=0.468$; $p=0.01$); cooperative learning ($r=0.425$; $p=0.01$), **long-term motivation** ($r=0.300$; $p=0.01$), **leadership style** with the subscales: training and instruction ($r=0.588$; $p=0.01$); democratic style ($r=0.353$; $p=0.01$); social support ($r=0.474$; $p=0.01$); positive feedback ($r=0.456$; $p=0.01$) **group cohesion** with the subscales: group integration - task ($r=0.312$; $p=0.01$); group integration - social ($r=0.283$; $p=0.01$); individual attraction to the group - task ($r=0.224$; $p=0.01$); individual attraction to the group - social ($r=0.275$; $p=0.01$); and **collective efficacy** with the subscales – abilities ($r=0.409$; $p=0.01$); unity ($r=0.432$; $p=0.01$); persistence ($r=0.438$; $p=0.01$); preparation ($r=0.407$; $p=0.01$); effort ($r=0.417$; $p=0.01$); collective efficacy (total) ($r=0.456$; $p=0.01$).

Additionally, negative correlations were revealed between **satisfaction with training and instruction** and ego-goal **orientation** ($r=-0.109$; $p=0.05$), performance-oriented **motivational climate** ($r=-0.380$; $p=0.01$), with subscales: unequal recognition ($r=-0.373$; $p=0.01$), punishment for mistakes ($r=-0.305$; $p=0.01$) and intra-team member rivalry ($r=-0.233$; $p=0.01$).

Satisfaction with team performance and the other psychological variables studied

The results of the correlation analysis between **satisfaction with team performance** and the psychological variables studied found 22 correlations, 19 of them positive and three negative (Figure 49).

Positive correlations were revealed between **satisfaction** and the following variables: mastery-oriented **motivational climate** ($r=0.327$; $p=0.01$) with the subscales – significance of the role ($r=0.203$; $p=0.01$); effort/improvement ($r=0.246$; $p=0.01$); cooperative learning ($r=0.356$; $p=0.01$), **long-term motivation** ($r=0.150$; $p=0.01$), **leadership style** with the subscales: training and instruction ($r=0.394$; $p=0.01$); democratic style ($r=0.327$; $p=0.01$); social support ($r=0.422$; $p=0.01$); positive feedback ($r=0.319$; $p=0.01$) **group cohesion** with the subscales: group integration - task ($r=0.279$; $p=0.01$); group integration - social activity ($r=0.271$; $p=0.01$); individual attraction to the group - task ($r=0.171$; $p=0.01$); individual attraction to the group - social activity ($r=0.206$; $p=0.01$); and **collective efficacy** with the subscales – abilities ($r=0.595$; $p=0.01$); unity ($r=0.512$; $p=0.01$); persistence ($r=0.499$; $p=0.01$); preparation ($r=0.548$; $p=0.01$); effort ($r=0.494$; $p=0.01$); collective efficacy (total) ($r=0.595$; $p=0.01$).

In addition, negative correlations were found between team performance satisfaction and performance-oriented **motivational climate** ($r=-0.164$; $p=0.01$) and the two subscales: unequal recognition ($r=-0.248$; $p=0.01$) and intra-team member rivalry ($r=-0.133$; $p=0.01$).

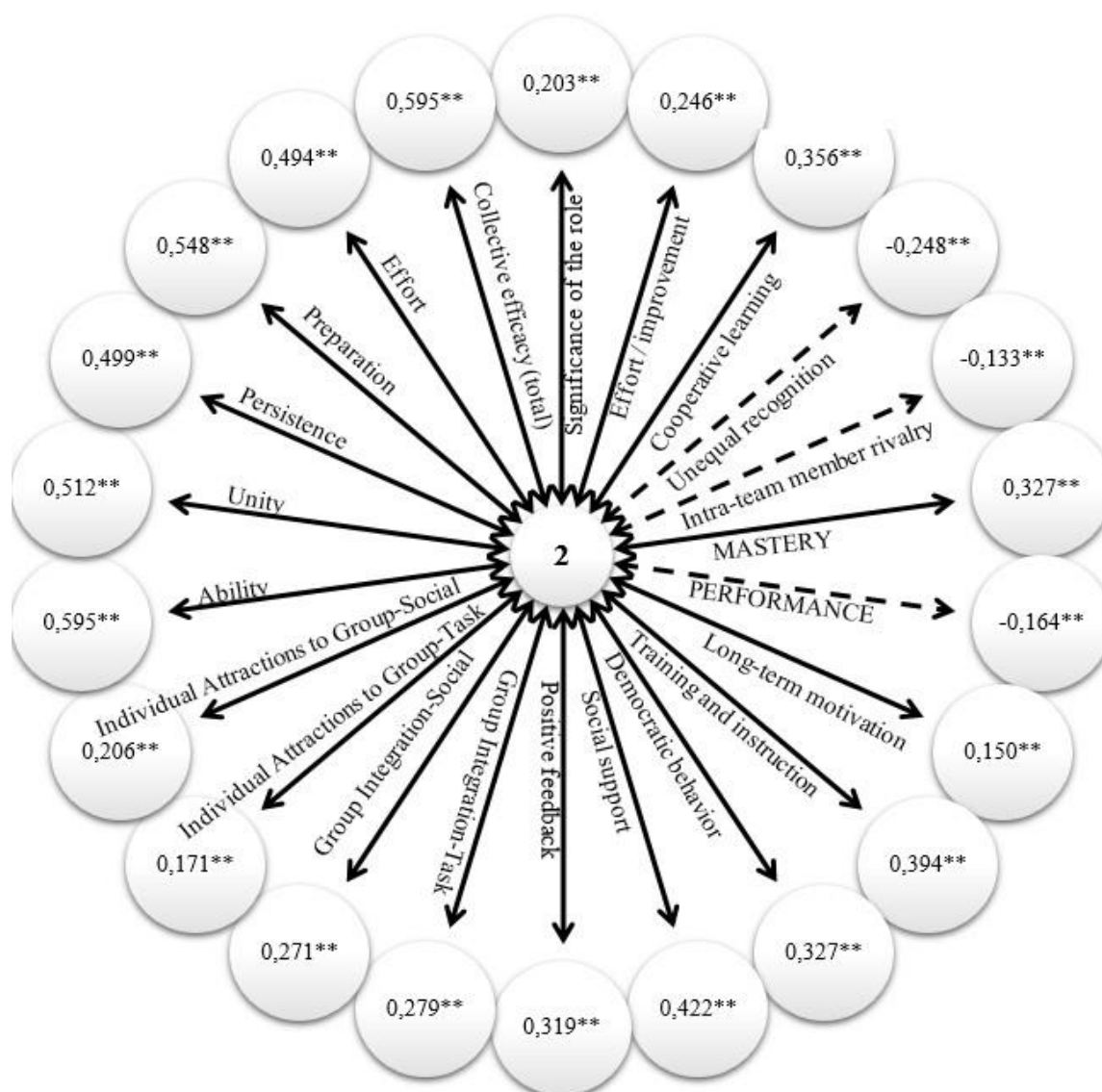


Figure 49. Interrelationships between satisfaction with team performance and the psychological variables studied

Direct correlation \longleftrightarrow Inverse correlation $\leftarrow\text{-----}\rightarrow$

Satisfaction with individual performance and other psychological variables studied

The results of the correlation analysis between **satisfaction with individual performance** and the psychological variables studied found 25 relationships, 20 of which were positive and five negative (Figure 50). Satisfaction with individual performance is positively correlated with the studied psychological variables: mastery-oriented **motivational climate** ($r=0.389$; $p=0.01$) with the subscales – significance of the role ($r=0.276$; $p=0.01$); effort/improvement ($r=0.313$; $p=0.01$); cooperative learning ($r=0.397$; $p=0.01$); **long-term motivation** ($r=0.281$; $p=0.01$); **leadership style** with the subscales:

Training and instructions ($r=0.403$; $p=0.01$); democratic style ($r=0.336$; $p=0.01$); social support ($r=0.388$; $p=0.01$); positive feedback ($r=0.323$; $p=0.01$) **group cohesion** with the subscales: group integration - task ($r=0.289$; $p=0.01$); group integration - social ($r=0.248$; $p=0.01$); individual attraction to the group - task ($r=0.174$; $p=0.01$); individual attraction to the group - social ($r=0.214$; $p=0.01$); **collective efficacy** with the subscales – abilities ($r=0.398$; $p=0.01$); unity ($r=0.386$; $p=0.01$); persistence ($r=0.418$; $p=0.01$); preparation ($r=0.318$; $p=0.01$); effort ($r=0.415$; $p=0.01$); collective efficacy (total) ($r=0.442$; $p=0.01$).

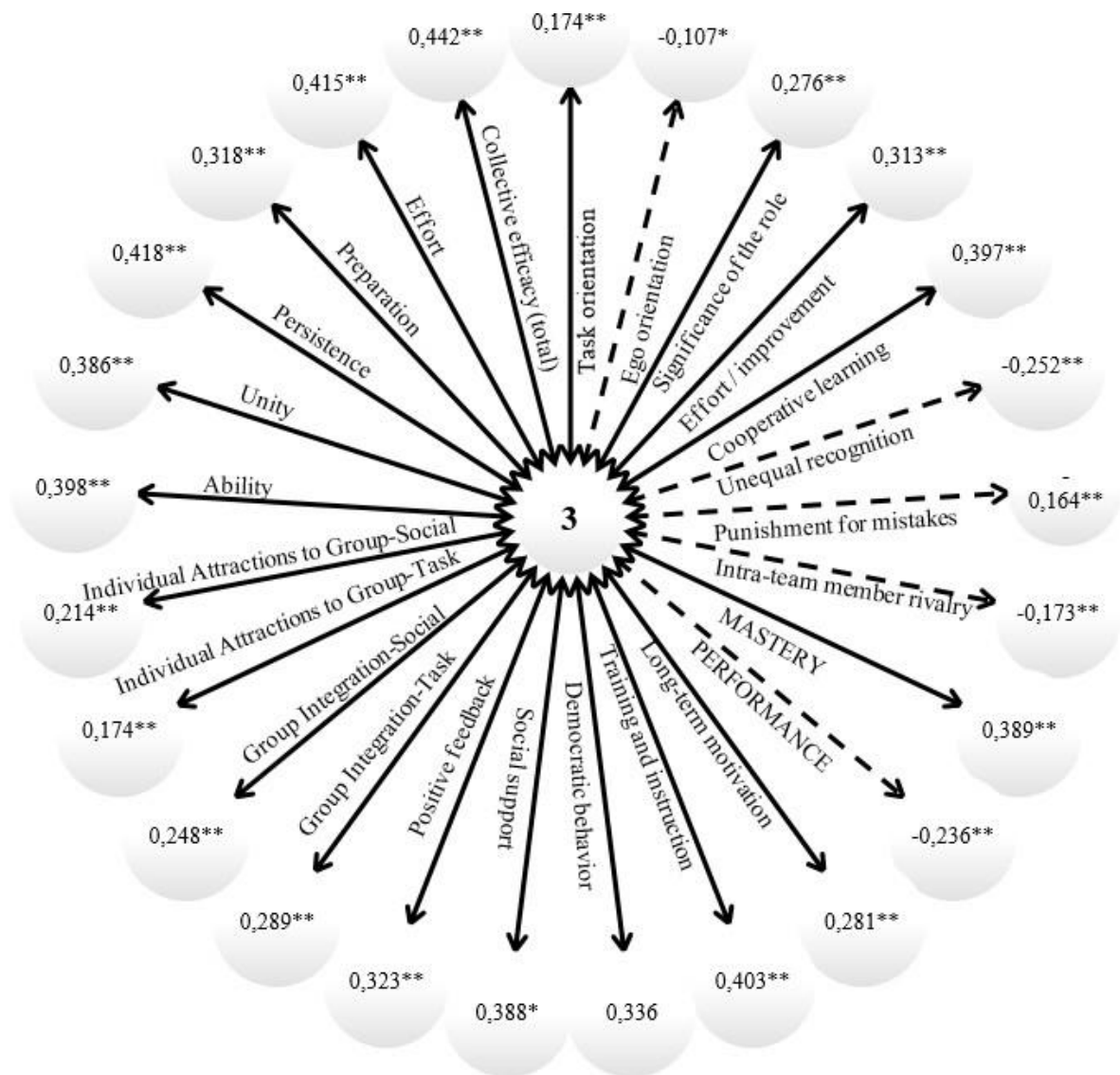


Figure 50. Interrelationships between satisfaction with individual performance and the psychological variables studied

Direct correlation \longleftrightarrow Inverse correlation $\dashleftarrow \dashrightarrow$

Negative correlations were found between **individual performance satisfaction** and ego **goal orientation** ($r=-0.107^*$; $p=0.05$), performance-oriented **motivational climate** ($r=-0.236$; $p=0.01$), with the subscales: unequal recognition ($r=-0.252$; $p=0.01$), punishment for mistakes ($r=-0.164$; $p=0.01$) and intra-team member rivalry ($r=-0.173$; $p=0.01$).

Satisfaction with the personal treatment and the other psychological variables studied

The correlation analysis revealed 25 dependencies, 20 of which were positive and five negative (Figure 51).

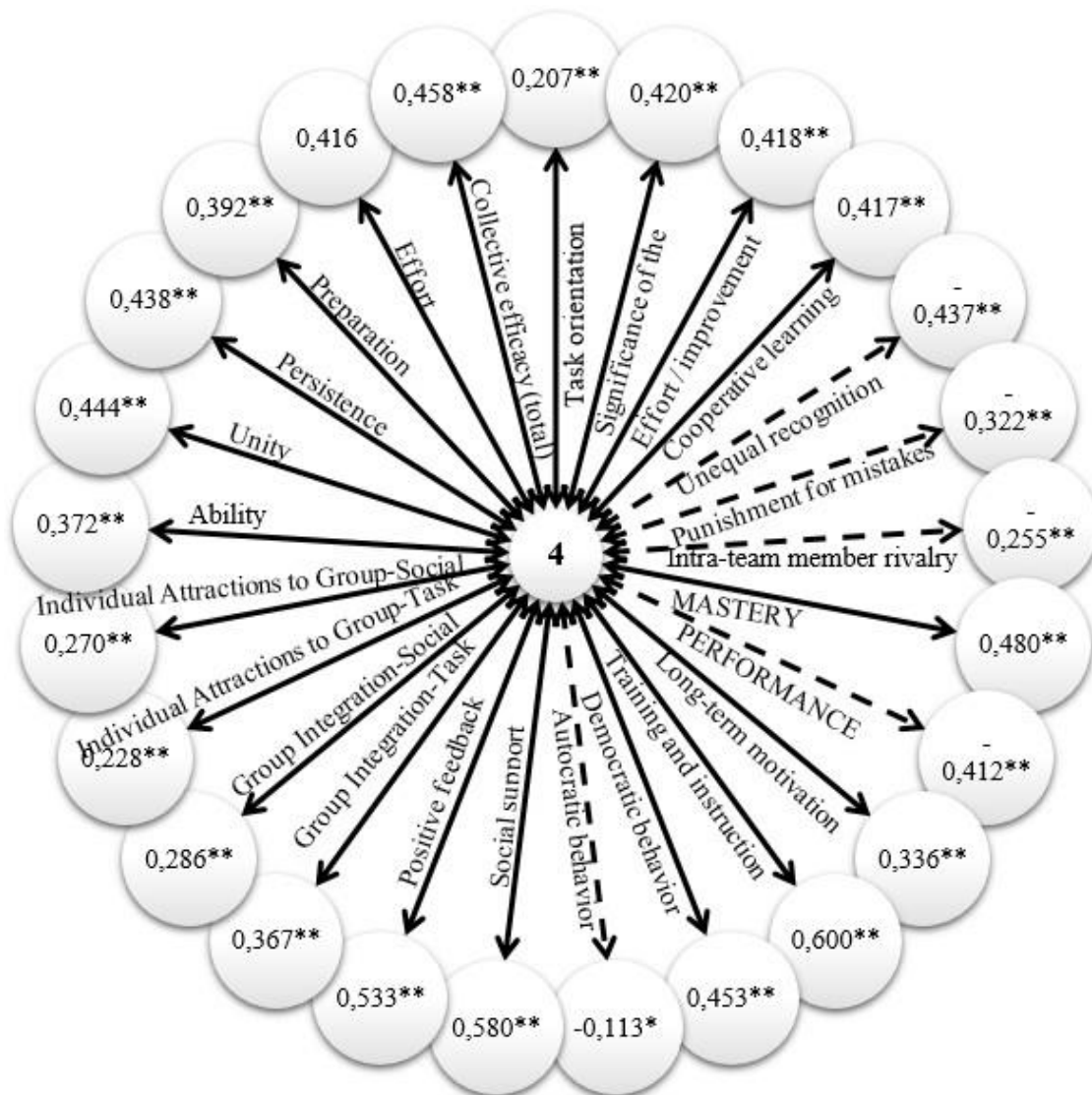


Figure 51. Interrelationships between satisfaction with the personal treatment and the studied psychological variables

Direct correlation \longleftrightarrow Inverse correlation $\dashleftarrow \dashrightarrow$

Positive interdependencies were established between the satisfaction of the personal treatment with the studied psychological variables: **goal orientation** to the task ($r=0.207$; $p=0.01$); mastery-oriented **motivational climate** ($r=0.480$; $p=0.01$) with the subscales – significance of the role ($r=0.420$; $p=0.01$); effort/improvement ($r=0.418$; $p=0.01$); cooperative learning ($r=0.417$; $p=0.01$); **long-term motivation** ($r=0.336$; $p=0.01$); **leadership style** with the subscales: training and instruction ($r=0.600$; $p=0.01$); democratic style ($r=0.453$; $p=0.01$); social support ($r=0.580$; $p=0.01$); positive feedback ($r=0.533$; $p=0.01$) **group cohesion** with the subscales: group integration - task ($r=0.356$; $p=0.01$); group integration - social activity ($r=0.286$; $p=0.01$); individual attraction to the group - task ($r=0.228$; $p=0.01$); individual attraction to the group - social activity ($r=0.270$; $p=0.01$); **collective efficacy** with the subscales – abilities ($r=0.372$; $p=0.01$), unity ($r=0.444$; $p=0.01$), persistence ($r=0.438$; $p=0.01$), preparation ($r=0.392$; $p=0.01$), effort ($r=0.416$; $p=0.01$), collective efficacy (total) ($r=0.458$; $p=0.01$). It is necessary to note that the strongest relationships are established between the subscales of the leadership style and satisfaction with the personal treatment.

Negative correlations were found between **satisfaction with the personal treatment** and performance-oriented **motivational climate** ($r=-0.453$; $p=0.01$) with the subscales: unequal recognition ($r=-0.437$; $p=0.01$), punishment for mistakes ($r=-0.322$; $p=0.01$), intra-team member rivalry ($r=-0.255$; $p=0.01$) as well as with authoritarian **leadership style** ($r=-0.113$; $p=0.05$).

3. REGRESSION ANALYSIS

In accordance with the theoretical model, a stepwise regression analysis was applied to verify the influence of goal orientation, motivational climate, long-term motivation, leadership style, collective efficacy, and group cohesion (in the role of independent variables) on satisfaction with sports activity (its components are placed separately in the role of dependent variables).

In the first model, the role of the dependent variable is satisfaction with training and instructions (Figure 52).

Results revealed that satisfaction with training and instruction increased with high levels of **goal-oriented task orientation** ($\beta=0.241^{**}$; $\Delta R^2=0.055$), mastery-oriented motivational climate subscales: effort/improvement ($\beta=0.392^{**}$; $\Delta R^2=0.279$), and cooperative learning ($\beta=0.164^{**}$; $\Delta R^2=0.352$), long-term motivation ($\beta=0.276^{**}$; $\Delta R^2=0.073$), **leadership style** subscales: training and instruction ($\beta=0.530^{**}$; $\Delta R^2=0.450$), social support ($\beta=0.218^{**}$; $\Delta R^2=0.477$), scale of **collective efficacy** (total) ($\beta=0.477^{**}$; $\Delta R^2=0.225$) and **group cohesion** with the scales: group integration - social activity ($\beta=0.186^{**}$; $\Delta R^2=0.084$), group integration - task ($\beta=0.250^{**}$; $\Delta R^2=0.131$) and individual attraction to the group - task ($\beta=0.157^{**}$; $\Delta R^2=0.151$).

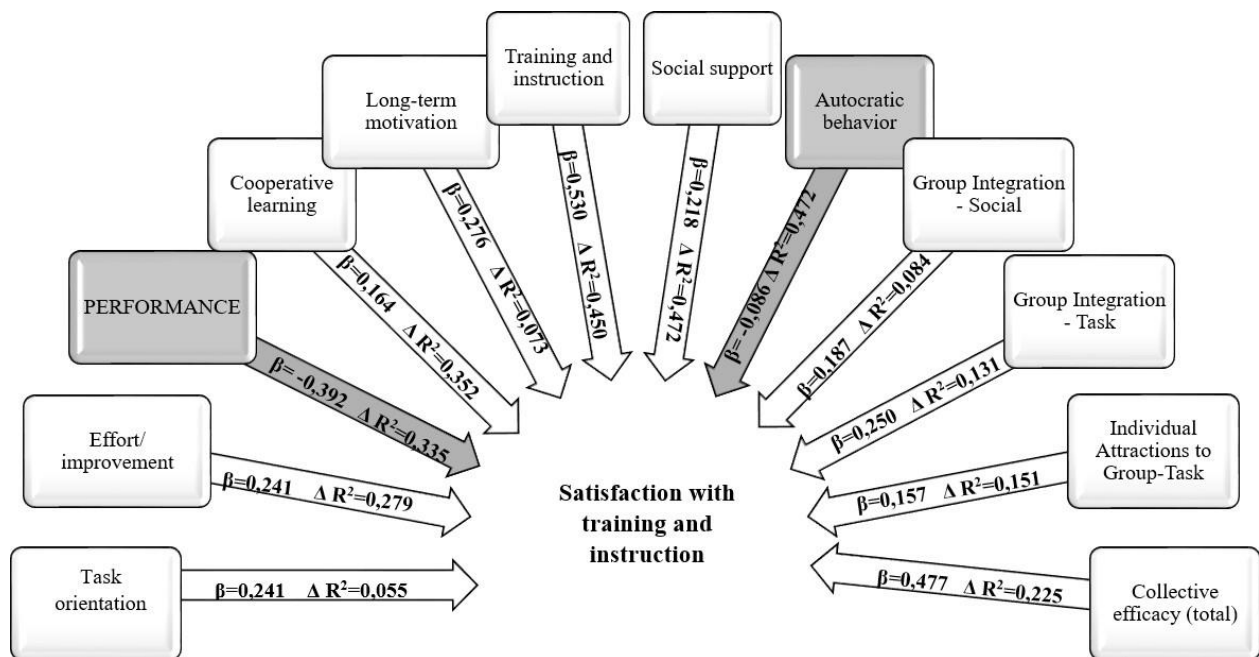


Figure 52. Influence of the examined psychological variables on satisfaction with training and instruction.

Performance-oriented motivational climate ($\beta=-0.392^{**}$; $\Delta R^2=0.335$) and **authoritarian leadership style** ($\beta=-0.086^{**}$; $\Delta R^2=0.472$) were found to have a negative influence on satisfaction with training and instruction.

The second model aims to reveal the impact of the studied psychological variables on **satisfaction with team performance** (Figure 53).

The results revealed that team performance is positively affected by the variables: **motivational climate** and its subscales: cooperative learning ($\beta=0.398^{**}$; $R^2=0.137$), punishment for mistakes ($\beta=0.128^{**}$; $R^2=0.159$), **long-term motivation** ($\beta=0.156^{**}$; $R^2=0.021$), **leadership style** with the subscales: training and instruction ($\beta=0.243^{**}$; $R^2=0.207$), social support ($\beta=0.262^{**}$; $R^2=0.180$), authoritarian style ($\beta=0.109^{**}$; $R^2=0.216$), scale of **collective efficacy** (total) ($\beta=0.909^{**}$; $R^2=0.347$) and the subscales of **group cohesion**: group integration - social ($\beta=0.218^{**}$; $\Delta R^2=0.087$), group integration - task ($\beta=0.193^{**}$; $R^2=0.114$), individual attraction to the group - task ($\beta=0.113^{**}$; $R^2=0.123$).

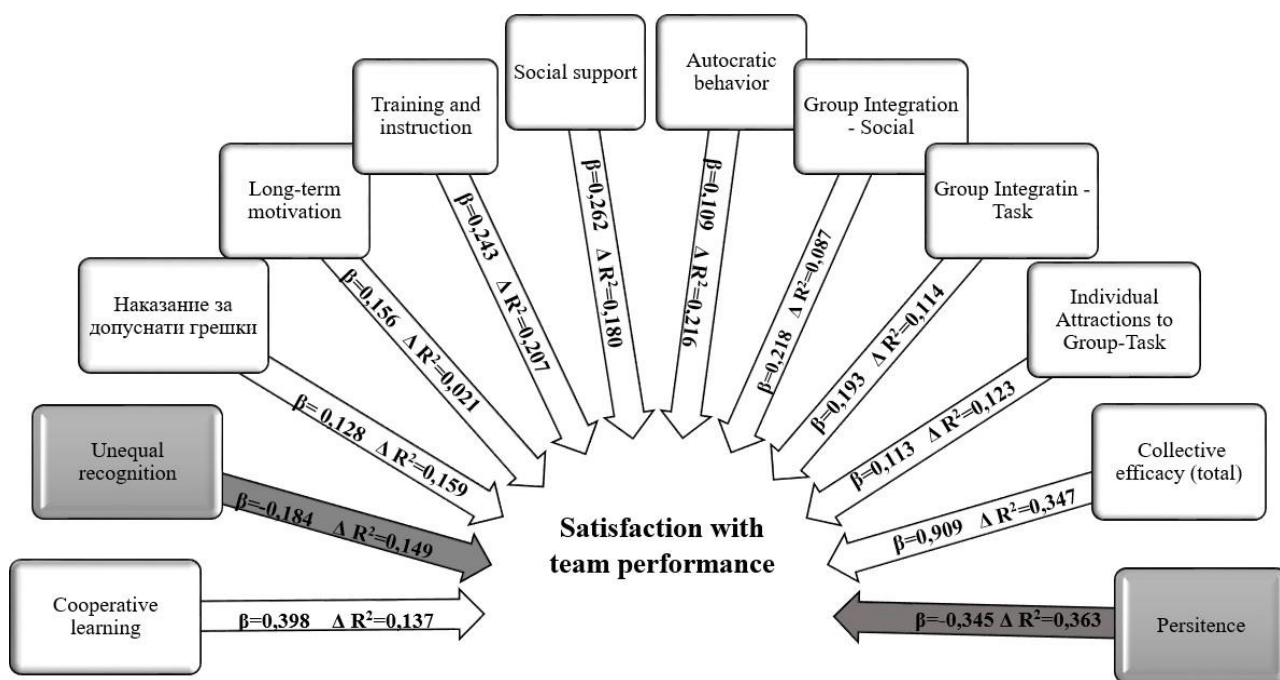


Figure 53. Influence of the investigated psychological variables on satisfaction with team performance.

In addition, regression analysis revealed that the coach's **unequal recognition**, performance-oriented motivational climate subscale ($\beta=-0.184^{**}$; $\Delta R^2=0.149$), and collective efficacy-**persistence** subscale ($\beta=-0.345^{**}$; $\Delta R^2=0.363$) decreased satisfaction with team performance. The negative regression of the persistence subscale determining collective effectiveness is an unexpected result. However, it relates to setting team goals and maintaining motivation until they are realized.

In the third model, the role of the dependent variable is **satisfaction with individual performance** (Figure 54).

The results obtained show that satisfaction with individual performance increases by applying **goal orientation** to the task ($\beta=0.204^{**}$; $\Delta R^2=0.039$), **mastery-oriented motivational climate** ($\beta=0.552^{**}$; $\Delta R^2=0.184$), **long-term motivation** ($\beta=0.287^{**}$; $\Delta R^2=0.080$), **leadership style** with the subscales: training and instruction ($\beta=0.272^{**}$; $\Delta R^2=0.170$), social support ($\beta=0.226^{**}$; $\Delta R^2=0.198$), the scale of **collective efficacy** (total) ($\beta=0.434^{**}$; $\Delta R^2=0.186$) and the subscales of **group cohesion**: group integration - social activity ($\beta=0.164^{**}$; $\Delta R^2=0.067$), group integration - task ($\beta=0.223^{**}$; $\Delta R^2=0.103$) and individual attraction to the group - task ($\beta=0.150^{**}$; $\Delta R^2=0.121$).

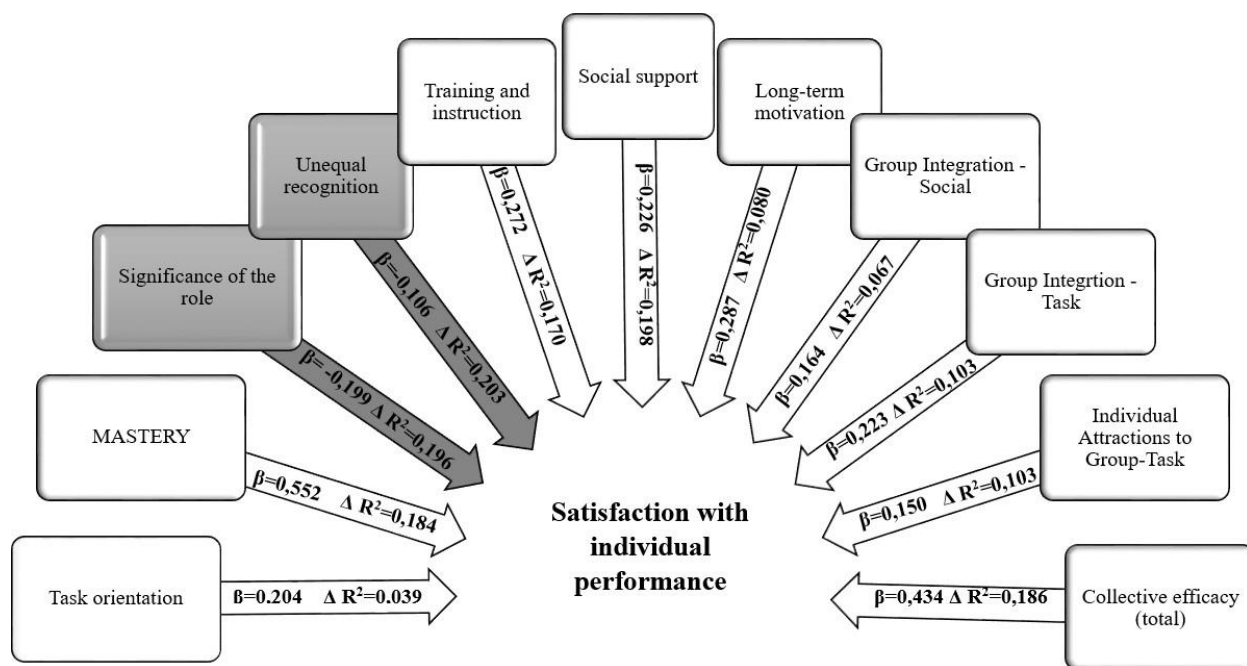


Figure 54. Influence of the studied psychological variables on satisfaction with individual performance.

Satisfaction with individual performance decreases when applying the motivational climate components - the significance of the role ($\beta=-0.199^{**}$; $\Delta R^2=0.196$) and unequal recognition ($\beta=-0.106^{**}$; $\Delta R^2=0.203$).

In the last research model, the role of the dependent variable is **satisfaction with the personal treatment** (Figure 55).

The results of the regression analysis revealed that: **goal orientation** to the task ($\beta=0.214^{**}$; $\Delta R^2=0.043$), **motivational climate** subscales: effort/improvement ($\beta=0.311^{**}$; $\Delta R^2=0.231$), cooperative learning ($\beta=0.158^{**}$; $\Delta R^2=0.343$), long-term motivation ($\beta=0.294^{**}$; $\Delta R^2=0.084$), **leadership style** with the scales: training and instruction ($\beta=0.313^{**}$; $\Delta R^2=0.421$), social support ($\beta=0.353^{**}$; $\Delta R^2=0.508$), positive feedback ($\beta=0.157^{**}$; $\Delta R^2=0.531$), the scale **collective efficacy** (total) ($\beta=0.456^{**}$; $\Delta R^2=0.205$) and **group cohesion** with the subscales: group integration - social activity ($\beta=0.150^{**}$; $\Delta R^2=0.170$), group integration - task ($\beta=0.298^{**}$; $\Delta R^2=0.103$) and individual attraction to the group - task ($\beta=0.183^{**}$; $\Delta R^2=0.153$) increase satisfaction with the personal treatment.

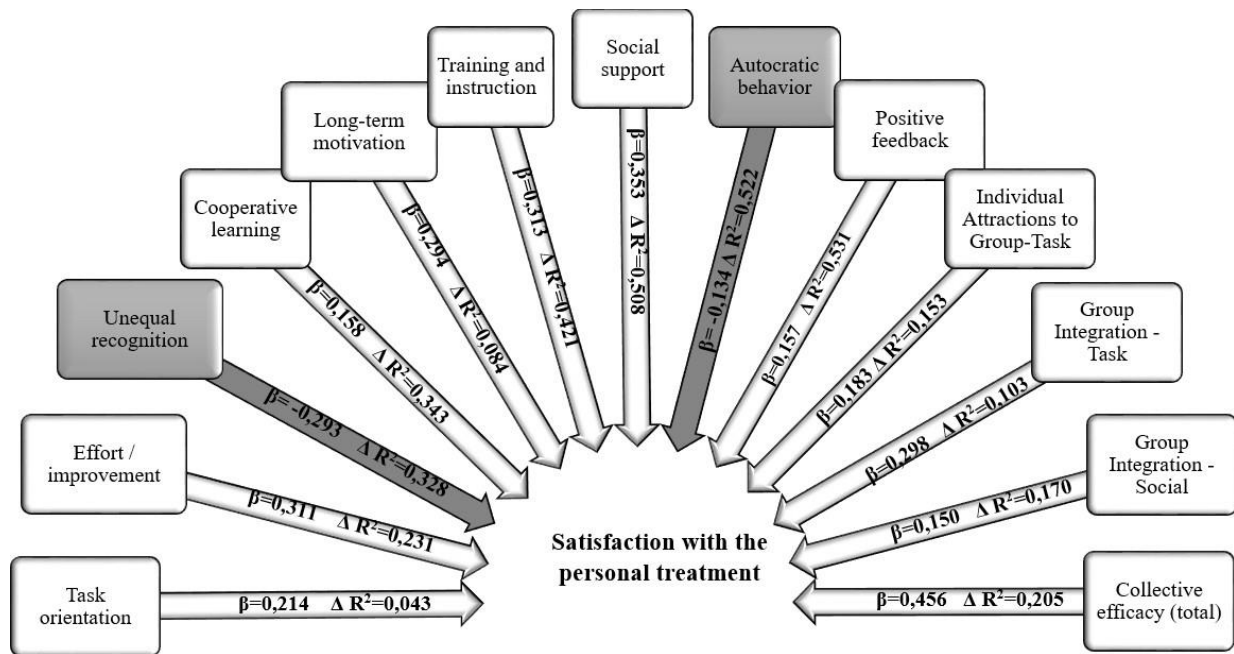


Figure 55. Influence of the studied psychological variables on satisfaction with the coach's personal attitude towards the athlete.

Unequal recognition as a component of performance-oriented motivational climate ($\beta=-0.298^{**}$; $\Delta R^2=0.328$) and **authoritarian leadership style** ($\beta=-0.134^{**}$; $\Delta R^2=0.522$) **reduce** satisfaction with the coach's personal treatment

CONCLUSIONS AND RECOMMENDATIONS

The results of the conducted research on the influence of goal orientation, motivational climate, long-term motivation, leadership style, collective efficacy, group cohesion, and satisfaction with sports activities in team sports give reason to draw the following conclusions:

1. The obtained results of the conducted psychological research **confirmed the central hypothesis** that the studied variables - goal orientation, motivational climate, long-term motivation, leadership style, collective efficacy, and group cohesion- impact satisfaction with sports activities among athletes practicing team sports.

2. The hypothesis was confirmed that there are differences in the studied psychological variables depending on the factors of gender, age, type of sport, sports experience, and participation in different competitions and rankings.

3. The hypothesis that there are interrelations between the studied psychological variables (goal orientation, motivational climate, long-term motivation, leadership style, collective effectiveness, group cohesion, and satisfaction) was confirmed. Task orientation, mastery-oriented motivational climate, long-term motivation, leadership style (except authoritarian leadership style), collective efficacy, and group cohesion are positively associated with satisfaction with sports activity

4. The hypothesis was partially confirmed that mastery-oriented motivational climate, goal-oriented task orientation, long-term motivation, coach's leadership style (except authoritarian style), collective efficacy (except persistence), and group cohesion increase satisfaction with sports activities in athletes practicing team sports.

5. The hypothesis was partially confirmed that a performance-oriented motivational climate decreases satisfaction; no influence of ego-goal orientation on satisfaction is found, while an authoritarian leadership style decreases satisfaction with training and instruction and the coach's personal attitude toward the athlete and increases satisfaction with team performance.

From a practical point of view, the conclusions drawn give reason to indicate several main **recommendations**, which are aimed at increasing the satisfaction of sports activities in team sports.

1. An appropriate motivational environment should be created by forming a mastery-oriented motivational climate emphasizing developing, refining, and improving sports skills.

2. Coaches should structure the activity through training and instructions and give positive feedback and social support to their team athletes.

3. It is necessary to implement strategies to help unite the team and increase collective effectiveness, such as teamwork, group training, coaching games, creating interpersonal connections that promote cooperation among members, and increasing satisfaction with sports activities.

4. The obtained statistically significant differences in the studied groups of athletes give us reason to assume that coaches should have a specific approach to their athletes during the training-competitive activity depending on the factors of gender, age, type of sport, sports experience, ranking and participation in different rank competitions.

PUBLICATIONS ON THE DISSERTATION TOPIC

1. **Doneva, V.**, Domuschieva-Rogleva, G., Yancheva, M., (2021) Leadership style and motivational climate in athletes. *Personality. Motivation. Sport: T. 25: Volume 25: NSA PRESS*, 2021, p.23-36.
2. Domuschieva-Rogleva, G., **Doneva, V.**, Yancheva, M., (2022) Motivation and leadership style of athletes. *International Scientific Congress "Applied Sports Sciences" 2 - 3 December 2022. Proceeding book, Volume 1. - Sofia: Scientific Publishing House NSA Press*, 2022, p.372-378.
3. **Doneva, V.**, Domuschieva-Rogleva, G., (2022) Perceived motivational climate and satisfaction of sports activity among competitors from team sports., *International Scientific Congress "Applied Sports Sciences" 2 - 3 December 2022. Proceeding book, Volume 1. - Sofia: Scientific Publishing House NSA Press*, 2022, p. 379-385.