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## ADAPTATION OF THE COLLECTIVE EFFECTIVENESS QUESTIONNAIRE IN SPORTS FOR RUSSIAN SPORTS TEAMS

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**Abstract.** In the literature of recent years on the psychology of sports, there is a shortage of data on the psychological prerequisites for the effectiveness of sports teams. In Russian psychology, research in this area is constrained by the lack of diagnostic tools necessary for them. This article presents the results of adaptation and preliminary testing of the Collective Effectiveness Questionnaire for Sports – Collective Efficiency Questionnaire for Sports (hereinafter – CEQS). Preference was given to (CEQS) Short, Sullivan, Feltz (2005). The main difference between CEQS and other collective performance questionnaires is that CEQS is adapted to the functioning of team sports in general and, therefore, can be used in all sports. The appearance of any new well-tested diagnostic methodology for compliance with psychometric criteria will contribute not only to improving the effectiveness of psychological research, but also to obtaining more reliable data. Goal: Conducting the first stage of adaptation of the methodology of the «Collective Efficiency Questionnaire for Sports» («Collective Efficiency Questionnaire for Sports»). The abbreviated name of the CEQS methodology. Research methods. The first stage of adaptation of the methodology consisted in checking the reliability of its Russian version according to the criterion of internal consistency, which was carried out by determining the Kronbach coefficient, as well as determining the correlation coefficients between the values of the scores on the questionnaire items. related to a certain indicator with a total score for this indicator. The study involved 140 athletes-representatives of team sports of qualification from the 3rd junior category to the MSMC. The questionnaire was translated from English into Russian. CEQS consists of 20 points divided into 5 scales, athletes expressed their opinion using a 10-point Likert-type scale with scores from 1 to 10. The results of the study. The obtained values indicate the internal consistency of the Russian version of CEQS. The application of the methodology for assessing the collective effectiveness of various sports teams has shown that it allows us to assess the differences in the ratio of indicators of collective effectiveness in individual teams.

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**Keywords:** Collective efficiency, self-efficacy, team sports, methodology adaptation, internal consistency, competitiveness resource, Collective Efficiency Questionnaire for Sports – (Collective Efficiency Questionnaire for Sports – CEQS).

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## АДАПТАЦИЯ ОПРОСНИКА КОЛЛЕКТИВНОЙ ЭФФЕКТИВНОСТИ В СПОРТЕ ДЛЯ РОССИЙСКИХ СПОРТИВНЫХ КОМАНД

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**Аннотация.** В литературе последних лет по психологии спорта отмечается дефицит данных о психологических предпосылках эффективности деятельности спортивных команд. В отечественной психологии исследования данного направления сдерживаются отсутствием необходимых для них диагностических инструментов. В этой статье представлены результаты адаптации и предварительная проверка Опросника коллективной эффективности для спорта – Collective Efficacy Questionnaire for Sports (далее – CEQS). Предпочтение было отдано (CEQS) Short, Sullivan, Feltz (2005). Основное различие между CEQS и другими коллективными опросниками производительности заключается в том, что CEQS адаптирован к функционированию командных видов спорта в целом и, следовательно, может использоваться во всех видах спорта. Появление любой новой хорошо проверенной на соответствие психометрическим критериям методики диагностики будет способствовать не только повышению эффективности психологических исследований, но и получению более надежных данных. Цель. Проведение первого этапа адаптации методики «Опросника коллективной эффективности для спорта» («Collective Efficacy Questionnaire for Sports»). Сокращенное наименование методики CEQS. Методы исследований. Первый этап адаптации методики заключался в проверке надежности ее российской версии по критерию внутренней согласованности, которая проводилась с помощью определения коэффициента Кронбаха, а также определения коэффициентов корреляции между значениями оценок по пунктам опросника, относящимся к определенному показателю с суммарным баллом по этому показателю. В исследовании приняли участие 140 спортсменов-представителей командных видов спорта квалификации от 3 юношеского разряда до МСМК. Был осуществлен перевод опросника с английского языка. CEQS состоит из 20 пунктов, разделенных на 5 шкал, свое мнение спортсмены выражали с помощью 10-балльной шкалы типа Лайкерта с оценками от 1 до 10. Результаты исследования. Полученные значения свидетельствуют о внутренней согласованности русской версии CEQS. Применение методики для оценки коллективной эффективности различных спортивных команд показало, что

она позволяет оценить различия в соотношении показателей коллективной эффективности в отдельных командах.

**Ключевые слова:** коллективная эффективность, самоэффективность, командные виды спорта, адаптация методики, внутренняя согласованность, ресурс конкурентоспособности, опросник коллективной эффективности для спорта – (Collective Efficacy Questionnaire for Sports – CEQS).

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*Introduction.* An urgent problem of modern sports psychology is the search for psychological resources for the competitiveness of athletes and sports teams. The problem of establishing the competitiveness resources of sports teams has specific aspects, especially obvious when considering the actions of teams under stress. Studies of coping with stress by a group have shown that the resources of coping with stress by a group are not equal to the sum of the individual resources of all team members [3, pp. 71–77]. It is impossible to equate individual and team strategies for overcoming stress [1]. They differ in essence and are caused by various individual psychological and socio-psychological factors. Team strategies for overcoming stress in representatives of team sports are developed to varying degrees: team strategies are less developed than individual ones [2, 4].

These facts explain the growing attention to the phenomenon of collective efficiency as a possible resource for the success of sports teams. A. Bandura, who described it, considers the collective effectiveness of a group as a phenomenon different from the self-efficacy of an individual, although interconnected with it.

Collective effectiveness, from the point of view of A. Bandura, is the general belief of the group in its ability to organize and jointly perform the actions necessary to achieve the set levels” [6, p. 477]. Although collective efficiency is a relatively new construct, research has shown evidence that it is interrelated with the effectiveness of teams.

Teams with a strong sense of collective effectiveness set more challenging goals, put in more effort, persist longer when faced with difficulties or defeats (Greenlees, Graydon, & Maynard, 1999), and ultimately have a better chance of success (Bandura, 2001). A positive relationship between collective efficiency and team cohesion was observed in sports such as rugby and basketball (for example, Kozub & McDonnell, J.F., 2000; Parrot, 2002), as well as in volleyball (Ramzaninezhad, R., Keshtan, M., Shahamat, M., & Kordshooly, S. 2009). A positive relationship between collective efficiency and the effectiveness of joint activities was observed in football teams [5], hockey teams, basketball teams, softball teams, and volleyball teams [7].

Sports psychologists have identified three aspects of collective effectiveness:

1) perceived effectiveness of the coach – reflects the coach's confidence in the player's ability to perform assigned tasks (Beauchamp, 2007; Chase et al., 1997);

2) perceived effectiveness of partners in sports – reflects the players' belief in the ability of their teammates to successfully complete the task (Lent & Lopes, 2002);

3) collective effectiveness is the group's shared belief in its joint ability to organize and perform actions necessary to achieve certain levels of achievement [6].

Athletes representing team sports form an idea of effectiveness with the help of these aspects, which lead to cognitive, affective and behavioral consequences, including such as an increase or decrease in athletic performance (Beauchamp, 2007; Watson et al., 2001).

There are many approaches to the study of the phenomenon of collective effectiveness. Their diversity is due to the fact that research is conducted in different countries on various sports, each of which has its own specifics [9].

The purpose of study. Research on collective effectiveness in the national psychology of sports is constrained by the lack of diagnostic tools necessary for this. In this regard, the aim of this study was to adapt the questionnaire "Collective efficiency questionnaire for sport" (CEQS), developed by Short et al.[8]. The adaptable questionnaire allows you to determine five parameters of collective effectiveness: effort, ability, preparation, perseverance, unity. The "effort" indicator characterizes the confidence of the team in the readiness of all its members to make the efforts necessary to achieve the team goal. The "ability" indicator reflects the confidence of the team in its ability to act more skillfully than rivals. The "preparation" parameter reflects the team's opinion that it is ready to acquire the necessary level of preparedness by the time the goal is achieved. The "perseverance" indicator characterizes the team's conviction in readiness to actively act to achieve the set goal, despite obstacles. The "unity" indicator reflects the team's belief in the ability to take coordinated actions to achieve a team goal. The authors of the questionnaire provide for the definition of a general indicator of collective efficiency by summing up the values of particular indicators [10].

*Methodology and methods.* The questionnaire consists of 20 items reflecting the idea of team members about collective effectiveness. The examinees are given instructions: "Evaluate the abilities of your team in terms of the upcoming game or competition, so that your team can ...". Athletes can express their opinion using a 10-point Likert-type scale with scores from 1 to 10. The objectives of the stage of adaptation of the collective effectiveness questionnaire considered in the article were: translation of the questionnaire from English into Russian. Evaluation of the translation by qualified experts. Assessment of the reliability of the Russian version of the questionnaire according to the criterion of internal consistency by determining the Kronbach coefficient, as well as

determining the correlation coefficients between the values of the scores on the questionnaire items. related to a certain indicator with a total score for this indicator. The study involved 140 athletes-representatives of team sports of qualification from the 3rd junior category to the MSMC. 76 (54.3 %) people made up the age group of 14–20 years, 36 people (25.7%) – the age group of 21–25 years, 28 people (20%) – the group aged 26–30 years. Athletes who took part in the study represent such sports as football, basketball, volleyball, handball, hockey, water polo. The study was conducted using the Google forms tool in February-March 2022. The study participants were 84 women and 56 men. The qualification of athletes ranged from the 3rd junior category to the MSMC. Table 1 shows the form of the adapted questionnaire.

Table 1

**Collective Performance Questionnaire Form**

		1	2	3	4	5	6	7	8	9	10
1	Outplay opposing team										
2	Resolve conflict										
3	Perform under pressure										
4	Be ready										
5	Show more ability than the other team										
6	Be united										
7	Persist when obstacle present										
8	Demonstrate a strong work ethic										
9	Stay in the game when it seems like your team isn't getting any break										
10	Play to its capability										
11	Play well without your best players										
12	Mentally prepare for this competition										
13	Keep a positive attitude										
14	Play more skillfully than the opponent										
15	Perform better than the opposing team										
16	Show enthusiasm										
17	Overcome distractions										
18	Physically prepare for this competition										
19	Devise a successful strategy										
20	Maintain effective communication										

Results of the reliability assessment of Russian version of the questionnaire were considered by the criterion of internal consistency.

The first stage of this assessment was to determine the correlation coefficients of scores on the questionnaire items related to a certain indicator with the corresponding total score. The corresponding psychometric requirements of the level of internal consistency of the questionnaire are

indicated by the values of correlation coefficients with values of 0.7 and higher. The obtained correlation coefficients are presented in Table 2. Most of the correlation coefficients exceed the value of 0.7. Only two correlation coefficients do not reach the value of 0.7, but are close to it. This allows us to conclude that the Russian version of the collective effectiveness questionnaire has acceptable internal consistency. The highest correlation coefficients were obtained by the indicators of “Ability” and “Effort”. Apparently, these parameters of collective efficiency are better reflected by athletes.

Table 2

**Correlation coefficients of the questionnaire items related to each of the indicators with the corresponding total score**

ABILITY			
Outplay opposing team	Show more ability than the other team	Play more skillfully than the opponent	Perform better than the opposing team
0,79	0,81	0,89	0,92
EFFORT			
Demonstrate a strong work ethic	Play to its capability	Show enthusiasm	Overcome distractions
0,85	0,87	0,82	0,89
UNITY			
Perform under pressure	Persist when obstacle present	Stay in the game when it seems like your team isn't getting any break	Play well without your best players
0,69	0,81	0,76	0,77
PERSISTANCE			
Be ready	Mentally prepare for this competition	Physically prepare for this competition	Devise a successful strategy
0,78	0,78	0,81	0,86
COHESION			
Resolve conflict	Be united	Keep a positive attitude	Maintain effective communication
0,74	0,82	0,67	0,79

The next step in assessing the internal consistency of the collective effectiveness questionnaire was the determination of the Kronbach coefficient for each indicator, which is considered as the most significant measure of the reliability of psychodiagnostic techniques (Cronbach, 1951). The values of the Kronbach coefficient for each indicator are given in Table 3.

Table 3

**Values of the Cronbach's Alpha coefficient for 5 scales of the questionnaire for Russian athletes**

ABLITY	EFFORT	UNITY	PERSISTANCE	COHESION
0,88	0,88	0,73	0,84	0,78

Since all values of the Cronbach's Alpha coefficient exceed 0.7, the methodology for diagnosing the collective effectiveness of sports teams can be recognized as internally consistent, which allows it to be applied in the practical diagnostic work of sports psychologists.

The average values of collective performance indicators in the sample as a whole (Table 4) show that athletes evaluate the abilities of their teams most critically. Necessary to achieve the set goals, while the indicators of willingness to give everything to achieve a team goal, team cohesion are close to the maximum.

Table 4

**Mean values and standard deviations according to CEQS scales in the sample as a whole**

	Mean value	Standard deviation ( $\pm$ )
ABLITY	27,28	$\pm$ 3,9
EFFORT	34,71	$\pm$ 5,6
UNITY	33,33	$\pm$ 5,7
PERSISTANCE	35,45	$\pm$ 5,4
COHESION	35,24	$\pm$ 5,4

The questionnaire allows you to find out how much the individual components of collective effectiveness are expressed in individual sports teams. Let's give as an example the average values of the indicator of collective effectiveness "Ability" (Figure 1).

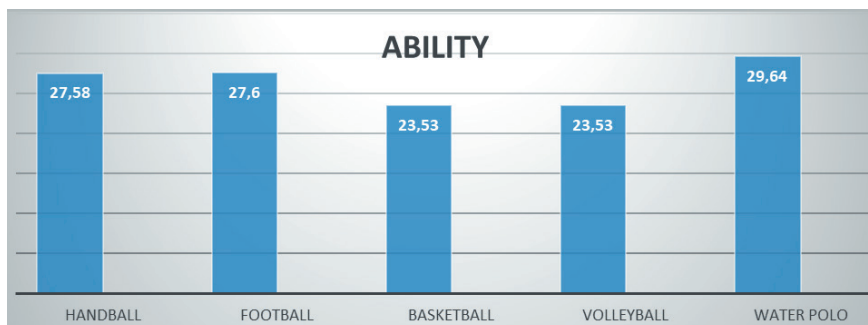


Figure 1- The average values of the collective efficiency indicator "Ability"

As shown in Fig. In Fig. 1, the teams studied differ in how they assess the abilities of their teams necessary to achieve high results, representatives of each team evaluate differently. This score is highest in the water polo team, which is objectively the most qualified of the teams studied. The lowest scores in volleyball and basketball teams

Thus, the results of the first stage of adaptation of the CEQS collective effectiveness diagnostic methodology can be recognized as successful. The Russian version of the questionnaire has reliability according to the criterion of internal consistency. It allows you to differentiate sports teams by the level of collective efficiency.

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