

# Coping Strategies and Mental Reliability As Psychological Determinants of Success in Sport

Liudmila Rogaleva  
Ural Federal University  
Ekaterinburg, Russia

Valerii Malkin  
Ural Federal University  
Ekaterinburg, Russia

Natalya Khon  
Department of Psychology  
Turan University  
Almaty, Kazakhstan

Zhadra Sekrecova  
Department of General and  
Applied Psychology  
Al-Faraby Kazak National University  
Almaty, Kazakhstan

Alla Kim  
Department of General and  
Applied Psychology  
Al-Faraby Kazak National University  
Almaty, Kazakhstan

**Abstract**—Sport is a popular activity for young people. At the same time, they are often not psychologically ready to overcome the difficulties of sports activities. The purpose of the study is to identify the optimal coping strategies of athletes who ensure success in sports and to identify the features of psychological reliability among athletes of different skill levels. 60 student-athletes involved in various sports (climbing, judo, athletics, team sports, etc.) participated. The first group included athletes of the first category (27 people), and the second group of candidates for the master of sports (33 people). The study proved that coping strategies and mental reliability are closely related to the level of sportsmanship. Higher-level athletes (candidates and masters of sports) demonstrate more active coping strategies and have a higher level of competitive emotional stability. The data obtained must be taken into account when conducting psychological work with athletes and further research may be devoted to the study of conditions that ensure the formation of more adequate behavioral strategies for athletes that provide a higher level of their sportsmanship.

**Keywords**—*coping strategies, mental reliability, success in sport*

## I. INTRODUCTION

Sport, due to its increasing popularity in the world, attracts an increasing number of young people who, having a sufficiently large motivation to participate in sports, at the same time are not ready to overcome the difficulties caused by high psychological stress that prevents them from achievements.

Modern research in the field of sports psychology suggests that low stress resistance of athletes not only leads to a decrease in athletic performance, but also becomes the main cause of sportsmen's injuries, leads to depression and impairment of psychological health [1].

In the work of Wolanin, Gross and Hong pointed out the negative impact of training triathlon on mental health. The authors argued that in sport there were risk factors that led to

the depression of athletes - these were injuries, forced retirement, lack of desired results, overtraining. Athletes may exhibit atypical signs and symptoms of depression, such as anger and irritability, as well as the involvement of unhealthy coping mechanisms, such as psychoactive substance abuse [2].

When analyzing approaches to solve negative problems in sports, two ways can be distinguished: the first is associated with conducting special psychological corrective work with athletes who find themselves in difficult life situations [3], and the second is focused on building a model of "safe sports" and positive practices of organizing athletes' lives positive psychology [4].

In the works of the founders of the theory of self-determination of Deci [5] and their followers, it is proved that when creating an environment that satisfies three psychological needs of a person: competence, autonomy and meaningful relationships, athletes develop qualities that improve control, reduce injury and recover faster after injuries [6].

In our opinion, the second approach is more productive, since it is focused on the prevention of negative states of athletes, as well as on the organization of the correct psychological and pedagogical work on the formation of qualities that contribute to the achievement of success in sports.

The purpose of the study is to study coping strategy and psychological reliability of athletes as determinants of success and level of sportsmanship in sports.

During the study, we proceeded from the fact that a person reacts to any discomfort in two ways: by building coping strategies or applying psychological defenses. Coping strategies are ways of activity that help to adapt in a difficult situation, maintain psychological balance and increase the level of psychological reliability of athletes [7]. The development of adaptive coping strategies for entering sports activities will contribute to the formation of more flexible behavioral skills, including helping to increase the level of mental reliability in stress-competitive conditions, thereby increasing resistance to stress-competitive situations

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**Corresponding Author:** Liudmila Rogaleva, Ural Federal University, Ekaterinburg, Russia.

and, consequently, increasing the success of performances.

## II. METHODS

The study involved 60 student-athletes involved in various sports (climbing, judo, athletics, team sports, etc.). The average age was 20,6 years. It should be noted that athletes have approximately equal level of the duration of sports activities. The division of athletes into two groups was carried out according to the level of sportsmanship, athletes of the 1st category made first group 33 people, and candidates for the master of sports 27 people made second group.

At the same time, the selection of participants was based on their achievements at competitions of different levels. The second group of participants included athletes participating in Russian and international competitions, while the first group of athletes to a greater extent competed at a university urban and regional level. The study was approved by the ethics committee of the university. The study was approved by the ethics committee of the university.

In the course of the research, ethical standards were observed, the principles of voluntariness and confidentiality were respected.

The research procedure was to conduct a psychodiagnostic study. The study used the following techniques: the personal questionnaire “SACS”. Personality questionnaire “SACS” is designed to study strategies and models of coping behavior (stress-overcoming behavior) as types of reactions of a person to overcome stressful situations. The questionnaire was proposed by S. Hobfall on the basis of a multi-axis model of “coping behavior” stress. In our study, we used the Russian version of Vodopyanova [8].

The questionnaire includes 54 statements, each of them must be evaluated by the participant on a 5-point scale. In accordance with the key, the sum of points is calculated according to nine models of behavior (coping strategies). To study the psychological reliability, the method “Psychical Reliability” by Milman was used [9].

The method includes 40 questions with three possible answers. Each of the answers corresponds to a certain score. The sum of points is calculated on eight scales. Psychic reliability of athletes determines the ratio of the characteristics of sensitivity to stress factors (internal uncertainty and significance, external uncertainty and significance) and special personality traits (competitive emotional stability, sports self-regulation, competitive motivation, stability - noise immunity).

When processing the data, a statistical package for social sciences, SPSS for Windows, was used.

The first study concerned the study of coping strategies for the behavior of athletes, depending on the level of their

sportsmanship. Table 1 presents the data on the severity of coping strategies, depending on the level of sportsmanship.

The findings suggest significant differences between the behavioral strategies used by athletes of different levels of sportsmanship, primarily in such as assertive actions, avoidance, indirect actions (manipulative actions) and asocial actions (aggressiveness, cruelty).

It has been revealed that athletes in the 1st category have an average assertive behavior model of 18, which is at an average level, while CMS is high and equals 25. This behavior model is considered as pro-active and effective in terms of overcoming difficult situations. Consequently, this strategy provides a higher adaptability in sports, so psychological and pedagogical work with athletes should be directed to the development of this particular strategy.

TABLE I. PRESENTS DATA ON THE SEVERITY OF COPING STRATEGIES, DEPENDING ON THE LEVEL OF SPORTSMANSHIP

	Rank	N	Mean	Std. Deviation	Std. Error Mean
Assertive actions	1 <sup>st</sup> rank	33	18.27	2.035	0.354
	CMS	27	25.78	2.391	0.460
Entry to the social contact	1 <sup>st</sup> rank	33	24.09	3.253	0.566
	CMS	27	22.67	2.353	0.453
Search for social support	1 <sup>st</sup> rank	33	22.55	4.906	0.854
	CMS	27	23.56	4.022	0.774
Careful actions	1 <sup>st</sup> rank	33	22.09	2.951	0.514
	CMS	27	21.22	4.964	0.955
Impulsive actions	1 <sup>st</sup> rank	33	17.18	4.558	0.794
	CMS	27	17.33	4.992	0.961
Avoidance	1 <sup>st</sup> rank	33	13.00	3.518	0.612
	CMS	27	10.11	2.006	0.386
Indirect action	1 <sup>st</sup> rank	33	19.18	3.770	0.656
	CMS	27	15.67	3.813	0.734
Asocial actions	1 <sup>st</sup> rank	33	16.82	3.147	0.548
	CMS	27	12.22	3.286	0.632
Aggressive actions	1 Rank	33	16.91	5.570	0.970
	CMS	27	15.00	3.431	0.660

It was also revealed that low-level athletes apply such ineffective strategies as aggressive or manipulative (self-justification, avoiding the analysis of the causes of errors, protective behavior), which are protective in nature, maintaining a positive self-esteem, with the aim of justifying themselves or blaming others for their own failures. That is often observed in the behavior of athletes. Consequently, purposeful work on the formation of adequate self-esteem of athletes will help reduce protective behavioral strategies and higher self-confidence.

The following study dealt with the study of mental security depending on the level of sportsmanship of athletes.

The study has shown that such components of mental reliability as competitive - emotional stability, sports self-regulation, stability - noise immunity, external uncertainty and external significance are closely related to the level of sportsmanship. The higher the level of sportsmanship, the higher the level of mental reliability is, regardless of the sport discipline (table 2).

TABLE II. THE AVERAGE VALUES OF THE COMPONENTS OF MENTAL RELIABILITY OF SPORTSMANSHIP

	Rank	N	Mean	Std. Deviation	Std. Error Mean
Competitive emotional stability	1 <sup>st</sup> rank	33	-2.73	3.243	0.565
	CMS	27	2.78	2.136	0.411
Sports self-regulation	1 <sup>st</sup> rank	33	-2.27	2.035	0.354
	CMS	27	2.44	2.100	0.404
Competitive motivation	1 <sup>st</sup> rank	33	1.73	2.035	0.354
	CMS	27	4.89	1.121	0.216
Stability – noise immunity	1 <sup>st</sup> rank	33	1.91	1.400	0.244
	CMS	27	3.22	0.801	0.154
Internal uncertainty	1 <sup>st</sup> rank	33	2.36	1.851	0.322
	CMS	27	1.33	1.177	0.226
External uncertainty	1 <sup>st</sup> rank	33	2.00	1.225	0.213
	CMS	27	1.00	0.832	0.160
Internal significance	1 <sup>st</sup> rank	33	2.00	0.750	0.131
	CMS	27	2.11	0.892	0.172
External significance	1 <sup>st</sup> rank	33	2.45	0.794	0.138
	CMS	27	1.67	0.961	0.185

Competitive emotional stability according to our data in the group of candidates for master of sports has high values, which indicates the severity of this component (value 2), while athletes of the 1st category have a low intensity of this component with an average value of 2. Indicators of emotional competitive stability are the nature, the intensity of the pre-competition and the emotionality of competitive excitation and its fluctuations, the degree of its influence on the character of the performance, etc.

### III. RESULTS AND DISCUSSIONS

The results show that competitive and emotional stability among candidates and masters of sports is ensured, first, due to such an indicator as sports self-regulation. This means that athletes of group 2 (CMS) can better understand and evaluate their emotional state, better manage their condition, and are also ready to rebuild during wrestling and have a more developed function of self-control over their

actions.

Low values for sports self-regulation indicate that athletes have large differences in the emotional background of the performance; external events cause strong emotional reactions that can lead to "emotional burnout".

Consequently, we can conclude that a higher level of skill is achieved through the development of conscious self-control and self-regulation. Therefore, psychological work with athletes, starting from the initial stage of preparation, should include methods that help develop the ability of athletes to self-regulate and self-control.

One more fact can be noted that the more successful athletes of the 2nd group have higher rates of competitive motivation, motivation associated with the desire to compete, willingness to compete, striving for any form of competitive struggle, willingness to give all their strength in training and competitions, etc.

In the analysis of stability and noise immunity parameter also revealed that they are higher in the average values in group 2 of the CMS. This component characterizes the stability of the internal functional state, the stability of motor skills and sports equipment, immunity to the effects of various kinds of interference.

It is interesting to note one more fact obtained in the course of our research, is that the athletes of group 2 of the CMS more expresses internal significance of the competition, while the athletes of group 1 are more dominated by the external significance of the competition. It seems that this indicator demonstrates that successful athletes set personal goals and less focused on external significance. Therefore, they act more adequately when unexpected interference occurs, due to proactive strategies to overcome stressful situations.

### IV. CONCLUSION

The study can draw such a conclusion that athletes reaching more higher level of sportsmanship achieve this not only through the development of their physical abilities, but also due to more adequate coping strategies for stress. In other words, constructive coping strategies, as well as higher levels of psychological reliability in competitions are important.

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