

# The relationship between athletes' coping strategies and indicators of dominant states

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## Abstract

**Objective of the study** was to identify the features of coping strategies for coping with stress among martial arts athletes with different experiences of successful competitive activities.

**Methods and structure of the study.** The experimental base of the study consisted of martial arts athletes specializing in martial arts of the Institute of Physical Culture and Sports of Peter the Great St. Petersburg University. A total of 60 athletes took part, aged 18-24 years. Of these, 30 were successful (15 boys and 15 girls) and 30 were unsuccessful (15 boys and 15 girls). To identify coping strategies, the Youth Coping Scale methodology was used, authored by Erica Frydenberg and Ramon Lewis, adapted by T.L. Kryukova.

**Results and conclusions.** In a situation of coping with stress, successful athletes actively use all types of coping strategies, choosing them depending on the characteristics of the situation, which allows them to cope with stress most effectively at the moment. Unsuccessful athletes have a much smaller set of coping strategies. In a stressful situation, such athletes try to cope with stress, first of all, by continuing to work hard in training.

**Keywords:** coping strategy, mental state, psychological preparation, martial artists, athletes, stressful state, coping behavior.

**Introduction.** In modern sports, especially in high-performance sports, the complexity of the technologies used, as well as the cost of an error in the methods of training an athlete, is very high, so a narrow specialization of all participants in the training process becomes a necessary condition. This fully applies to psychological preparation, which can be most effectively carried out by a purposefully trained specialist - a sports psychologist.

The relevance of this work is also determined by the results that martial artists have shown in competitions in the last few years. Achievements are growing, and with them, daily loads, after which it is no longer enough to restore only the original physical condition, it is also necessary to monitor the psychological one.

To date, the relationship between coping strategies and dominant states has not been sufficiently studied,

taking into account the success of sports activities, in particular, among martial artists.

**Objective of the study** was to identify the characteristics of coping strategies for coping with stress in martial artists with different levels of successful competitive activity.

**Methods and structure of the study.** The experimental base of the study was made up of martial arts athletes from the martial arts specialization of the Institute of Physical Culture and Sports of Peter the Great St. Petersburg University. A total of 60 athletes aged 18-24 took part. Of these, 30 were successful (15 boys and 15 girls) and 30 were unsuccessful (15 boys and 15 girls). To identify coping strategies, the «Youthful Coping Scale» technique was used, authored by Erica Freidenberg and Ramon Lewis, adapted by T.L. Kryukova.

The technique consists of 80 questions, where 79 statements with five answer options on the R. Likert scale and one question with a free answer, in which respondents must list the methods they use to cope with a stressful situation and anxiety. From the 79 statements of the questionnaire, 18 scales or coping strategies are formed. The boundaries for determining the levels of use of coping strategies are shown in Table 1.

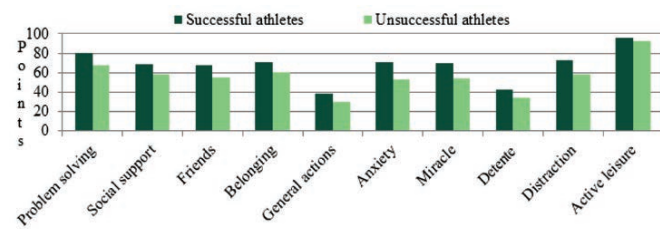
Table 1. Boundaries for determining the levels of use of coping strategies (Youthful Coping Scale by E. Friedenberg, R. Lewis)

Evaluation of the indicator	Level characteristic
60-100	High values
30-60	Medium values
0-30	Low values

**Results of the study and discussion.** Figure 1 and Table 1 present the mean values of significantly different indicators of coping strategies.

Table 2 and Figure 1 clearly show the frequency of use of certain coping strategies in stressful situations by successful and unsuccessful athletes. Successful athletes are significantly more likely to use such

strategies as «Problem Solving», «Social Support», «Friends», «Belonging», «General actions», «Anxiety», «Miracle», «Detente» «Distraction» and «Active Leisure».



Average values of reliably different indicators of coping strategies of high-ranking and low-ranking martial artists according to the YUKSh method (E. Frydenberg, R. Lewis)

The obtained results primarily mean that successful athletes, unlike unsuccessful ones, consciously use the whole range of coping strategies: productive, social and unproductive. Depending on the situation, they choose how to cope. This conclusion is confirmed by the data in the table: the indicators of successful athletes are higher than those of unsuccessful ones on 17 scales. This means that successful athletes are, in principle, more familiar with coping strategies and

Table 2. Average values of coping strategy indicators in athletes of the studied groups according to the YUKSh method (E. Frydenberg, R. Lewis)

Coping strategies	Average indicators		Mann-Whitney U-test of significance of differences	Average indicators		Mann-Whitney U-test of significance of differences
	Successful athletes	Unsuccessful athletes		Young men	Girls	
Problem Solving	80.34	67.76	0,001**	75.68	73.86	0.910
Work, achievements	74.43	74.82	0.978	73.92	75.73	0.515
Spirituality	46.30	42.64	0.490	41.80	49.66	0.059
Positive focus	69.78	66.17	0.581	69.00	67.00	0.778
Social support	68.69	58.11	0,001**	62.88	66.40	0.242
Friends	67.30	54.82	0,024*	61.92	62.13	0.955
Belonging	70.43	59.76	0,027*	64.96	67.46	0.603
General actions	38.47	29.41	0,007**	34.80	34.33	0.843
Professional help	52.17	48.23	0.783	51.60	48.66	0.800
Anxiety	70.95	53.17	0,003**	65.28	60.26	0.340
Miracle	69.21	53.64	0,005**	60.80	65.60	0.340
Mismatch	39.13	37.17	0.649	35.84	42.40	0,010**
Detente	42.95	33.88	0,037*	36.48	43.46	0,045*
Ignoring	45.43	40.88	0.407	43.20	44.00	0.735
Self-accusation	60.21	53.52	0.144	57.80	56.66	0.800
Withdrawal into oneself	55.69	50.00	0.377	50.80	57.40	0.331
Distraction	72.73	58.47	0,005**	66.08	67.66	0.978
Active Leisure	95.47	93.00	0,024*	94.32	94.60	0.895

\*- significance of differences  $p \leq 0,05$ , \*\*- significance of differences  $p \leq 0,01$



know how to use them effectively. The indicators of unsuccessful athletes prove the opposite: unsuccessful martial artists «get lost» in a stressful situation and often do not understand how to cope with it [2, 5].

The social coping style includes 5 coping strategies of the YUKSh methodology, of which 4 strategies are significantly more often used by successful athletes. (Social support, Friends, Belonging, Social actions). Such results prove that successful athletes qualitatively analyze the situation and consciously resort to the help of others: specialists, friends or relatives. At the same time, the average score of unsuccessful athletes on the scale «Community Actions» is very close to the minimum value on this scale (29.41).

High-ranking athletes also more often resort to such coping strategies as «Miracle» and «Anxiety». This may be related to the level of responsibility. The higher the achievements, the higher the responsibility. When faced with a stressful situation, under such pressure and daily workloads, the level of anxiety increases and sometimes you want everything to be resolved miraculously. Unsuccessful athletes do not have such a problem, although their indicators are in the average range, this suggests that they resort to these coping strategies, but not as often as successful athletes [1, 4]. Successful athletes also resort to the strategies «Distraction» and «Active rest» significantly more often than unsuccessful ones. Such a spread of indicators on the «Distraction» scale: 72,73 for successful and 58,47 for unsuccessful ( $p \leq 0,005^{**}$ ) confirms the conclusion that successful athletes use all possible resources to cope with stressful situations, regardless of what coping style they belong to. The authors of the technique characterize this scale as: distraction from the problem, using such relaxation methods as reading books, television, entertainment in society.

The presence of high indicators on the «Active rest» scale creates a balance of stress and rest: successful athletes make a choice, decide on how to cope with a stressful situation. This can be a quiet rest, as in the «Distraction» scale (relaxation, reading books) or «Active rest» in contrast.

According to the results of statistical data processing, significant differences were also revealed between the groups of boys and girls. Girls significantly more often use such coping strategies as «Discoping» and «Discharge». These coping styles include tears, screaming, letting off steam, and painful conditions. The «Disability» scale also includes such a parameter

as refusal to take any action aimed at solving the problem. However, in this case, it cannot be said that girls tend to refuse to solve the problem, since the indicators on the «Problem Solving» scale are 73,86, which means a high frequency of using this coping strategy. The data obtained only indicate that girls are more likely than boys to refuse to solve the problem, but this does not mean that girls always do this [3, 5].

**Conclusions.** In a situation of coping with stress, successful athletes actively use all types of coping strategies, choosing them depending on the specifics of the situation, which allows them to most effectively cope with stress at the moment. Unsuccessful athletes have a much smaller set of coping strategies. In a stressful situation, such athletes try to cope with stress, first of all, by continuing to work hard during training.

The results obtained can be used to improve the training of athletes by introducing psychological support for sports activities, with the aim of forming the personal qualities necessary for a successful career.

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