

Optimization of athletes' mental self-regulation under conditions of sports restrictions during the covid-19 pandemic

UDC 159.9.072.42



PhD, Associate Professor **A.E. Lovyagina**¹

Master student **I.K. Syrykh**¹

PhD, Associate Professor **O.V. Tiunova**²

¹Saint Petersburg State University, Saint-Petersburg

²Federal Science Center of Physical Culture and Sport (VNIIFK), Moscow

Corresponding author: olgatiunova@yandex.ru

Abstract

Objective of the study was to develop and test a mental self-regulation optimization program for athletes under conditions of restrictions due to the COVID-19 pandemic.

Methods and structure of the study. Participants were athletes (men and women) engaged in different sports. The questionnaire "Difficulties of self-regulation in conditions of self-isolation" and the questionnaire of self-government by Y. Kul and A. Furman were used in the study. A program of mental self-regulation for athletes being involved in training and competition activities has been developed based on the psychodiagnostic data analysis. The experimental group of athletes included the program in their preparation, control group trained in the usual mode. A comparative analysis of mental self-regulation among control and experimental groups was conducted.

Results and conclusions. The effectiveness of athletes' mental self-regulation in COVID-19 pandemic conditions depends on the level of formation of planning, self-motivation and volitional regulation. Classes on the program significantly increased the effectiveness of athletes' mental self-regulation. The classes were aimed at improving goal setting, self-motivation of doing sports and persistence in difficult situations during training and competition activities.

Keywords: COVID-19 pandemic, athletes, mental self-regulation.

Introduction. Due to the COVID-19 pandemic restrictions, athletes had difficulties with normal training process and competitions [1, 5]. These difficulties negatively affected the athletes: their motivation and psychological well-being decreased, and their anxiety and emotional burnout increased [3, 4]. For two years, restrictions due to COVID-19 have been maintained and new ones have been introduced. Therefore, optimizing mental regulation skills that could increase the effectiveness of sports training are extremely relevant for athletes.

Objective of the study was to develop and test a program to optimize mental self-regulation of athletes under the COVID-19 pandemic restrictions.

Methods and structure of the study. The study involved 195 athletes (82 men and 113 women) involved in athletics, swimming, cross-country skiing,

sports and rhythmic gymnastics, volleyball, football, judo and boxing. The age of athletes is 18-24 years, sports experience is 7-16 years, russian sports qualification: first adult category (23.1%), candidate for master of sports (48.7%), master of sports (28.2%). At the first stage (15.11.2020 - 10.02.2021), a survey of athletes was conducted according to the questionnaire of A. E. Lovyagina and I.K. Syrykh "Difficulties of self-regulation under conditions of self-isolation" and the questionnaire of self-government by Yu. Kul and A. Furman in adaptation by O.V. Mitina and E.I. Rasskazova [2, 5]. Authors of the study had developed the program to optimize mental self-regulation in training and competition activities based on the diagnostic results. At the second stage (25.03.2021-20.06.2021), athletes of the experimental group attended classes where they studied the program. After that, a com-



parative analysis of self-government indicators in the athletes of the experimental (22 men and 19 women) and control (21 men and 20 women) groups was conducted. The groups were not statistically significantly different in terms of sport, training experience, and athletic qualifications. Diagnostics and corrective activities were conducted remotely using the google-forms online service and the Zoom program.

Results of the study and their discussion. According to the estimates of the majority of athletes, the situations of training camps and competitions cancellation, as well as the worsening of financial situations and the inability to solve everyday problems as it was before the pandemic turned out to be the most difficult for them in the conditions of COVID-19 restrictions. Limitations in communication with the coach and teammates, health problems, distance learning, etc. were noted as less difficult. The survey showed that during the COVID-19 pandemic, improving physical fitness and technical and tactical skills caused athletes much less difficulties than increasing psychological readiness for competitions. Athletes evaluate the degree of difficulty of situations that have arisen due to COVID-19 limitations in different ways, but the effectiveness of their mental self-regulation does not depend on the type of problem situation. It is statistically reliable (regression analysis).

From the list of 22 statements about the difficulties of self-government during the pandemic, were identified problems that reduce the effectiveness of mental self-regulation of athletes under the constraints of the COVID-19 pandemic (Table 1.). It turned out that the quality of self-government mostly depends on the athlete's ability to put forward the goals of his athletic training and adjust them in constantly changing conditions. The effectiveness of self-regulation in situations of COVID-19 restrictions is negatively affected by problems with "planning", motivational and volitional

skills that on turn reduces mental stability and ability to maintain persistence to achieve current goals.

Based on the identified problems of self-government, a program for optimizing mental self-regulation was developed for athletes, including group forms of work (focus groups, discussions, psychotechnical games) and individual psychological counseling for athletes (Table 2.). Group classes were held once a week for 1,5 months. Individual consultations were held at the request of athletes 2-3 days after each group session, as well as after the end of the entire cycle. During the consultations, it was discussed how an athlete applies self-regulation techniques that were considered in group classes, whether it turns out to apply these techniques in training and competition situations, what else needs to be done to reinforce mastered skills, etc.

After the program was completed, the athletes were surveyed again. The Y. Kul A. Furman method revealed statistically significant (Wilcoxon criterion) improvements in self-determination ($Z = 3,78$; $p \leq 0,01$), self-motivation ($Z = 3,91$; $p \leq 0,01$), cognitive self-control ($Z = 2,81$; $p \leq 0,05$) of athletes engaged in the program of optimization of mental self-regulation, volitional skills ($Z = 4,06$; $p \leq 0,001$) and readiness to overcome failures ($Z = 3,69$; $p \leq 0,01$). In the control group (not engaged in the program) there were no statistically significant positive changes in the studied indicators of self-government. And the indicators of self-motivation even worsened (Wilcoxon's criterion, $Z = -2,74$; $p \leq 0,05$). The effectiveness of mental self-regulation in difficult situations during training and competition activities turned out to be higher in athletes engaged in the program than in athletes of the control group (Student's criterion, $t=2,67$, $p \leq 0,05$). Most of the athletes in the control group rated the effectiveness of self-government as average: sometimes they managed themselves successfully, sometimes not. And

Table 1. Difficulties of self-government determining the effectiveness of mental self-regulation of athletes during the COVID-19 pandemic (multiple regression analysis, $R^2 = 0,756$)

Athletes' answers about the difficulties of self-regulation	β	p	Self-government problems
1. It was difficult to set goals, to plan anything.	-0,236	0,004	Goal setting
2. It was difficult to act flexibly, to change the scheduled action plan.	-0,309	0,001	Planning
3. It was difficult to contain the irritation, the anger, the rage.	-0,209	0,005	Emotional control
4. It was difficult to persistence and finish what was started.	-0,187	0,022	Volitional skills
5. Couldn't figure out how to train to minimize my loss of fitness.	-0,146	0,043	Planning
6. I wanted to quit sports, I hardly forced myself to continue my sports career.	-0,152	0,039	Motivation

**Table 2.** Program of optimization of mental self-regulation in difficult situations during training and competition activities

Goals	Objectives	Activities	Planned results
To increase motivation to do sports	Analysis of motives for doing sports. Formation of ideas about self-motivation. Mastering self-motivation techniques.	The method of unfinished sentences. Group discussion. Psychological diary.	Athletes will improve their understanding of their motives for playing sports. They will develop the ability to motivate themselves.
To improve planning	Formulation and reformulation of goals in the context of changes in the training schedule and competitions. Development of variable plans for their sports training.	Focus group discussion. Exercise «Designing goals». Psychological diary. Psychotechnical game «Chameleon».	Athletes will improve the ability to set goals and adjust them due to changes in the situation.
To increase self-control of emotions	Formation of ideas about the peculiarities of their emotional sphere. Analysis of the causes of negative emotions. Training in self-regulation techniques to control irritation and anger.	Exercises: «Physical relaxation», «Switching attention», «Rationalization». Psychological diary.	Athletes will improve the ability to react, repress and experience negative emotions.
To improve the ability to show strong-willed efforts	Analysis of the difficulties of persistence. Informing about the peculiarities of the development of volitional skills. Formation of persistence skills.	Focus group discussion. Finding situations for the development of persistence. Diary of psychological life.	Athletes will increase the severity and generalization of persistence.

the representatives of the experimental group gave good and excellent assessments of the effectiveness of self-government: they mostly managed themselves well and controlled themselves all the time.

Conclusion. Athletes are experiencing decline of mental self-regulation under the constraints of the COVID-19 pandemic due to insufficiently formed skills in planning sports training, self-motivation to do sports and volitional skills. The results of the study showed that classes aimed at improving planning, self-motivation and volitional regulation optimize the mental self-regulation of athletes in conditions of COVID-19 restrictions. This program can be used to improve the psychological preparedness of athletes.

References

1. Andrianova R.I., Fedoseev D.V., Lenshina M.V., Lubyshv E.A. Kontrol fizicheskogo i funktsionalnogo sostoyaniya igrokov basketbolnoj komandy vysokokvalifikatsii v usloviyah pandemii COVID-19 [Monitoring of physical and functional state of elite basketball players in Covid-19 pandemic]. *Teoriya i praktika fizicheskoy kultury*. 2021. No. 9. pp. 11-12.
2. Mitina O.V., Rasskazova E.I. Metodika issledovaniya samoupravleniya Y.Kulya i A. Furmana: psichometricheskie harakteristiki russkoyazychnoj versii [J. Kuhl's and A. Fuhrman's self-government test: Psychometric Properties of russian language version]. *Psychological Journal*, 2019. V.40(2). pp. 111–127.
3. Timakova T.S., D.E. Stratilatova Vliyaniye kovidnoy izolyatsii na psihoemotsionalnoe sostoyaniye i sorevnovatelnyuyu rezultativnost otdelnykh predstavitelej sportivnoy elity [The impact of covid isolation on the psycho-emotional state and competitive performance of individual representatives of the sports elite]. *Fizicheskaya kultura i sport. Olimpijskoe obrazovanie. Proceedings International scientific-practical conference*. Krasnodar: KGUFKST publ., 2021. pp. 309-312.
4. Andreato L. V., Coimbra D. R., Andrade A. Challenges to Athletes During the Home Confinement Caused by the COVID-19 Pandemic. *Strength and Conditioning Journal*. 2020. V. 42 (3). pp. 1-5. DOI: 10.1519/SSC.0000000000000563
5. Lovyagina A., Syrykh I. Difficulties of self-regulation during the COVID-19 pandemic among female athletes and non-sport female students. *International Journal of Sport and Exercise Psychology*. 2021. 19:sup1, S1-S539. pp. 38-39 DOI:10.1080/1612197x.2021.1982479