

Effect of Conduct Self-Regulation on Functional State and Physical Development of Cadets Studying in Military Institutes

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Abstract

The article analyzes the experimental study of the effect of the conduct self-regulation on the functional state and physical development of cadets studying in a military institute. Theoretical analysis of various guidance documents on the study problem shows that at the present stage of modernizing the Russian National Guard Troops and higher professional education, military institutes must use efficient innovative approaches to obtaining knowledge by cadets. It goes about developing an individual efficient pedagogical impact on cadets that contributes to forming self-development, searching for nonstandard solutions for problems, and better learning of the educational material. The authors define the interrelation between the conduct self-regulation and models of the conduct self-regulation and a complex of physical exercises that were developed and introduced to the educational process of the military institute as the main factors that determine high efficiency of physical training of cadets. The article identifies the problem on establishing a contradiction between the needs of troops in officers who are ready for sudden fulfillment of service and service-combat tasks, and pedagogical capabilities of the educational process of the military institute that contribute to forming the conduct self-regulation and developing cadets' physical skills required for this. Reasons of low level of physical conditioning and functional state of the first-year cadets are critically analyzed.

Keywords: Model of the conduct self-regulation; Complex of physical exercises; Forms of physical conditioning.



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1. Introduction

At the present stage of reforming, the process of transforming the internal troops of the Ministry of Internal Affairs of the Russian Federation into the Federal National Guard Troops Service (hereinafter referred to as FNGTS RF) substantiates the need to reconsider the whole system of military-professional training of future officers and providing troops with highly qualified specialists with the necessary level of psychological and physical conditioning. Stable condition of the FNGTS RF, maintenance of its high combat and mobilization readiness depend on the quality of military-professional training. This actualizes the need for drastic changes in the system of military-professional training of cadets.

Numerous results of studying (Andrunik, 2015; Anthopova *et al.*, 1992; Dubrovsky, 2004) military-professional training of cadets have shown that in practice there was another correlation of the conduct motives when the cadets' internal motives were not a dominant of their activity and were formed under the external constraint.

In this situation, there is a discrepancy between the goals of the military higher educational institution and the cadet's interests. This substantiates the following *contradiction*: on the one hand, the previous military-professional motivation system prioritized for military service loses its validity; and on the other hand, the military-professional training of cadets has not yet fully mastered the means and mechanisms of the conduct self-regulation that can ensure (maintain) the required functional state and physical state under new conditions.

The productive experience accumulated by the pedagogical and psychological science on the conduct self-regulation and supported by applied studies makes it possible to partially resolve this contradiction. Thus, axiological aspects of forming the personality's discipline are touched upon in the works of A.P. Andrunik, Z.V. Artemenko, F.T. Bondar, L.A. Nemirovskaya, R.A. Rogozhnikova, N.S. Shkitina, N.E. Schurkova *et al.* Psychological problems of forming the personality's discipline were studied by L.Ya. Dorfman, M. Seligman, E.P. Utlik, N.F. Fedenko *et al.* Studies of A.V. Kiriyakova, P.E. Matveev, L.D. Unarova, I.V. Yakovleva *et al.* are

devoted to forming a system of the value structure and axiological ideas about the conduct. The methodology of personality-oriented behavior management in self-organizing, self-developing systems is developed by A.V. Molodchik, S.V. Komarov, N.B. Akatov, I.A. Esaulova et al.

However, the problems related to the impact of the cadets' conduct self-regulation on their functional state and physical conditioning have not been actualized neither in the pedagogical science nor in military pedagogy and psychology. Today they do not have a harmonious methodology to solve them. Thus, the study aims at researching the impact of the conduct self-regulation on the cadets' functional state and physical conditioning.

2. Methods and Organization of the Research

188 male cadets were examined during the military professional activity.

The study was conducted at the Perm Military Institute of the FNGTS RF by using resources of the research laboratory of the Department of Physical Training and Sports. Before and after the experiment, the cadets underwent prophylactic medical examination, their conduct self-regulation was diagnosed, and their physical characteristics were tested (Morosanova, 2004; Shmoylova, 2004)

The mathematical and statistical processing of the experimental material included analyzing the Erismann index, the Pignet index, the Pearson's r correlation coefficient, and the Student's t-criterion. When testing statistical hypotheses in this study, the critical level of significance was <0.05 .

3. Results and Discussion

In order to select the appropriate methods and techniques, the use of which will make it possible to optimally form components of the conduct self-regulation and to develop physical qualities of the cadets' successful combat service, the analysis was made. It has resulted in the following:

1. The overwhelming majority of first-year cadets are mainly characterized by low physical development and state functioning. This is due to the fact that during the adolescent period, the educational load at school and the impact of socio-psychological factors increase.

2. Low level of indices of conduct self-regulation development (in EG – 62.766% of cadets, in CG – 64.184% of cadets). This is due to the fact that the first-year cadets suffer difficulties in adapting to the new educational environment, and they have no idea of their physical capacities and abilities to self-regulate their conduct (Larin *et al.*, 2016).

3. Basic physical qualities are insufficiently developed. This is due to the high requirements to the level of general, strength and speed endurance, power, and the organism resistance to the impact of unfavorable factors (Larin and Dubrovsky, 2017).

To reveal the difference in the level of the diagnostic apparatus formation, the authors have introduced their model on the conduct self-regulation and a complex of physical exercises developed by them into the service-combat activity of the military institute. The complex of physical exercises was done as morning physical exercises, during academic studies, in sports activity and physical training during the service-combat activity (Order of the Director of the Federal Service of the Russian National Guard Troops No. 100 dated March 29, 2018). Cadets of the experimental group participated in the approbation.

Based on the results of the study at the final stage, the authors stated that the final result in the experimental group was more vivid than the dynamics of the control group (Andrunik, 2011; Andrunik and Molodchik, 2013). This was due to the efficient improvement of the conduct self-regulation that had a considerable effect on the development of cadets' physical characteristics.

The results obtained at the final stage are schematically shown below in Table 1 and Figures 1-3.

Fig-1. Indicators of Conduct Self-Regulation in the Control Group

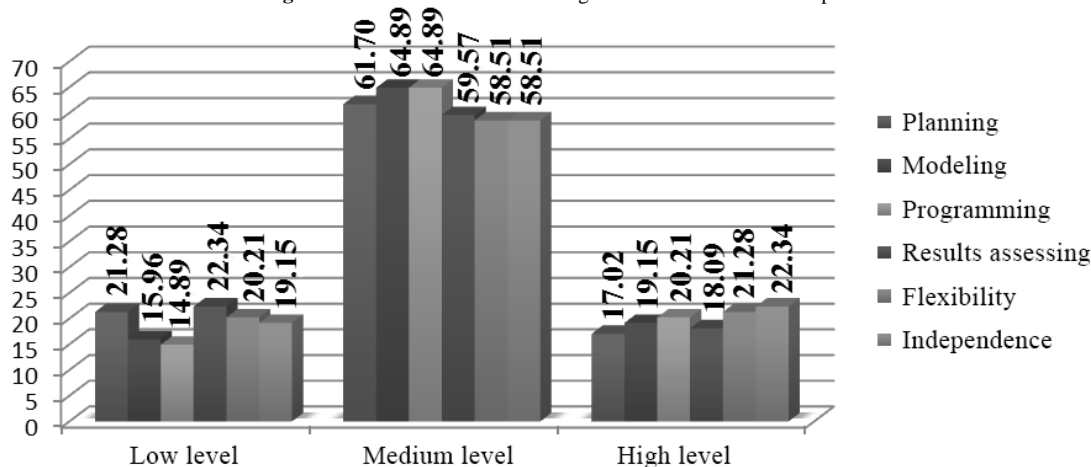


Fig-2. Indicators of Conduct Self-Regulation in the Experimental Group

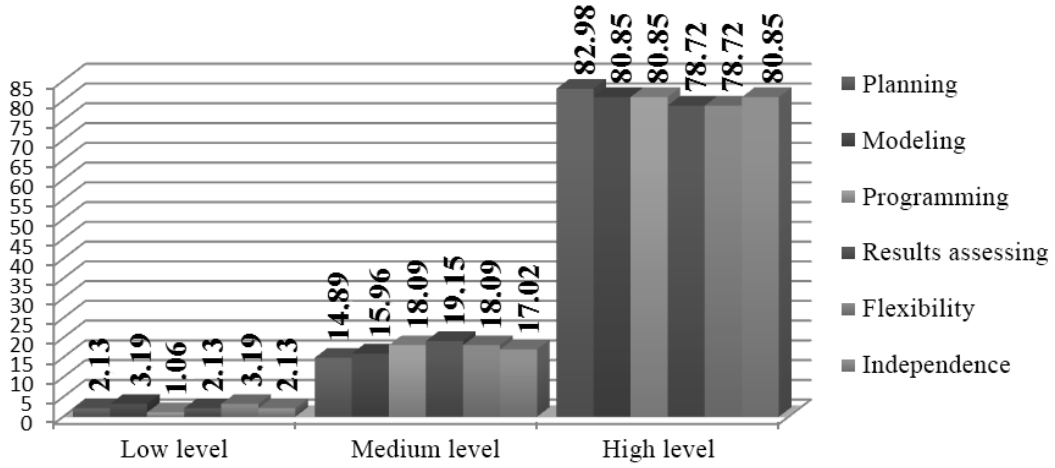
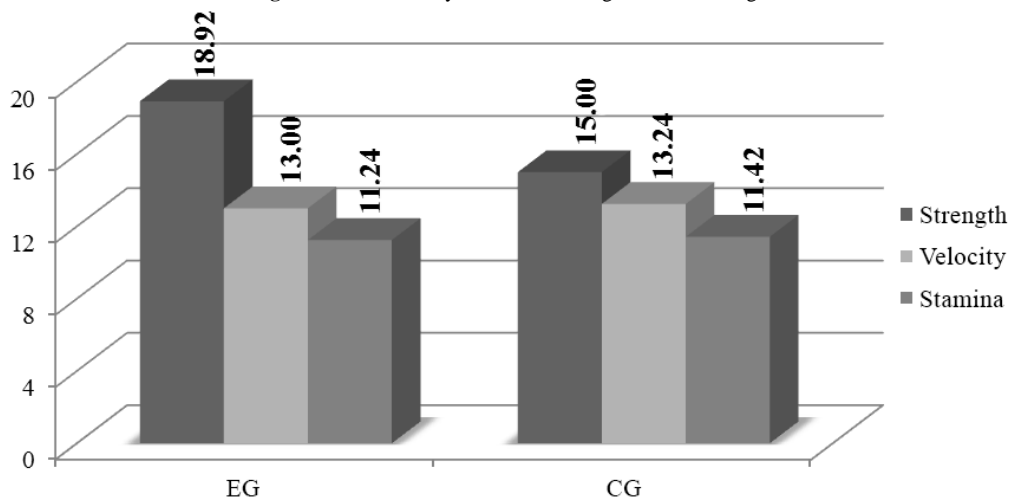


Table-1. Results of the Final Diagnosis of the Conduct Self-Regulation Formation

Ser. No.	Indicators under study	EG	CG	t
		x±m	x±m	
Physical development and state functioning				
1.	Height in the standing position, cm	178.96±0.58	178.72±0.71	0.26 p<0.05
2.	Weight, kg	78.46±0.75	75.72±0.78	2.53 p<0.05
3.	Chest circumference, cm			
	Maximal inhalation	100.24±0.52	97±0.51	4.45 p<0.05
	Maximal exhalation	95.62±0.48	92.68±0.55	4.03 p<0.05
	Pause	97.62±0.5	94.23±0.48	4.89 p<0.05
4.	Erismann index, cm	5.03±0.52	4.93±0.58	0.27 p<0.05
5.	Pignet index, points	13.14±1.08	13.52±1	0.26 p<0.05
Indicators of conduct self-regulation development				
Ser. No.	Indicators under study	Level, (%)		r
		Low	Low	
		Medium	Medium	
		High	High	
1.	Planning	2.128	21.277	-0.45
		14.894	61.702	
		82.979	17.021	
2.	Modeling	3.191	15.957	-0.31
		15.957	64.894	
		80.851	19.149	
3.	Programming	1.064	14.894	-0.22
		18.085	64.894	
		80.851	20.213	
4.	Assessing of results	2.128	22.340	-0.39
		19.149	59.574	
		78.723	18.085	
5.	Flexibility	3.191	20.213	-0.31
		18.085	58.511	
		78.723	21.277	
6.	Independence	2.128	19.149	-0.27
		17.021	58.511	
		80.851	22.340	
7.	General level	2.305	18.971	-0.32
		17.198	61.347	
		80.496	19.680	

Physical readiness				
Ser. No.	Indicators under study	$\bar{x} \pm m$	$\bar{x} \pm m$	t
1.	Hitching, times	18.92±0.17	15.00±0.16	16.79 p<0.05
2.	Running 100 m, s.	13.00±0.02	13.24±0.02	8.49 p<0.05
3.	Running 3,000 m, s.	11.24±0.03	11.42±0.02	6.38 p<0.05

Fig-3. Indicators of Physical Conditioning at the Final Stage



4. Conclusion

Based on the obtained results, the authors have solved the problem related to the need to eliminate the contradictions between the current requirements of the state and the society to training future officers and the lack of a theoretical, methodological and practical basis for forming the conduct self-regulation and adapting to modern conditions of the military professional education. At the same time during the research the following tasks were solved:

- The conduct self-regulation model containing a complex of physical exercises was practically implemented,
- Instruments and basic parameters of forming the conduct self-regulation were approbated and specified, and
- The formation of self-regulation in the course of pilot work was monitored and controlled.

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