

# Peculiarities of aggressive behavior manifestation and mental self-regulation in police officers during the war

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## ABSTRACT

**Aim:** To compare the peculiarities of aggressive behavior and mental self-regulation in police officers with different experiences of service activities in the conditions of war.

**Materials and Methods:** The research was conducted during 2023–2024 among police officers ( $n = 68$ ) and the 3<sup>rd</sup> training year police cadets ( $n = 72$ ). Research methods: analysis and generalization of literary sources, psycho-diagnostic methods, methods of mathematical statistics.

**Results:** Differences in the manifestations of aggression between police officers and cadets were found. In particular, the cadets demonstrated significantly ( $p < 0.001$ ) higher values on the scales of "Suspicion" (4.2 points) and "Hostility index" (7.4 points), which indicates a more pronounced tendency to interpret the social environment as potentially threatening. At the same time, police officers showed significantly ( $p < 0.001$ ) higher indicators on the scales of "Physical aggression" (8.2 points) and "Aggression index" (22.6 points), which indicates a readiness to physically respond to a threat. It was found that police officers have a significantly lower level of general mental self-regulation (24.0 points) and flexibility (6.3 points) compared to cadets (32.7 and 7.0 points, respectively), which may indicate the rigidity of behavioral strategies due to adaptation to professional activities under martial law.

**Conclusions:** The results obtained indicate the need to develop mechanisms of self-regulation in police officers as a critical component of the system of psychological support for the professional activities of police officers, prevention of their aggressive behavior, especially in the context of performing service duties in situations of increased threat and uncertainty characteristic of wartime.

**KEY WORDS:** self-regulation, aggression, police activities, locus of control

Wiad Lek. 2025;78(8):1530–1537. doi: 10.36740/WLek/209505 DOI

## INTRODUCTION

The mental health of police officers is a critical resource for ensuring the effective performance of professional functions to ensure law and order and the safety of citizens, especially in times of war. Police service activities involve constant readiness to act in emergency situations, is accompanied by a high level of psycho-emotional stress, chronic stress and the need to make decisions in a state of uncertainty and time pressure.

Prolonged exposure to high-risk conditions leads to negative consequences, primarily in the mental sphere [1]. In stressful situations, the body's blood composition also changes. Hormones secreted by the endocrine glands cause anxiety, alertness, and aggression [2]. The issue of studying and maintaining stable psycho-emotional states is relevant, as their imbalance reduces professional efficiency and creates risks for both the employee and the environment.

Mental self-regulation is a key mechanism for controlling emotions and aggression in difficult condi-

tions. Self-regulation is understood as the ability to consciously adjust emotional state and behavior using mental techniques and attitudes. According to research, the development of self-regulation skills in stressful (extreme) situations is one of the most effective ways to increase police officers' psychological resilience [3]. Highly developed self-regulation skills play a leading role in a person's ability to control their own mental activity, emotional states and behavior in professional activities [4]. During martial law, when the intensity of psycho-emotional stress increases significantly, the importance of self-regulation enhances meaningfully. Previous research confirms the effectiveness of targeted training of emotional regulation skills, physical and psychophysiological training as a means of reducing stress reactivity among law enforcement officers [5]. This involves the use of various psychological and physiological techniques (breathing exercises, relaxation, conscious regulation of emotions, etc.) to reduce muscle tension and emotional arousal that accompany

dangerous activities. Preventing the accumulation of aggressive impulses through self-regulation helps to reduce the risks of escalation of conflicts in service activities and excessive aggression. The results of the research can be used in the system of psychological support for police officers to develop trainings and programs of psychological support for police officers aimed at increasing their stress resilience and developing self-regulation skills to prevent excessive aggression.

## AIM

The aim is to compare the peculiarities of aggressive behavior and mental self-regulation in police officers with different experiences of service activities in the conditions of war.

## MATERIALS AND METHODS

### PARTICIPANTS

The empirical basis of the work is the results of an experimental research conducted in 2023-2024 with the participation of the 3<sup>rd</sup> training year police cadets studying in the specialty referred to as "Law Enforcement" at the National Academy of Internal Affairs (NAIA, Kyiv, Ukraine) who underwent practical training ( $n = 72$ ) and patrol police officers who took advanced training courses at the NAIA ( $n = 68$ ). The study groups were formed taking into account the duration of practical experience: from 6 months (police cadets) to 3 years (police officers). This time interval reflects the early stage of professional adaptation and entry into police activities.

To achieve the research aim, a set of interrelated methods was used: analysis and generalization of literary sources on the selected topic, psycho-diagnostic methods, methods of mathematical statistics. Analysis and generalization of literature sources was used to conduct an analytical review of scientific sources on the outlined range of issues (19 sources from MedLine, Scopus, Web of Science, and Index Copernicus were analyzed).

Psycho-diagnostic methods involved conducting research work with police officers. For this purpose, valid methods were used: Buss-Durkee Aggression Inventory, Proclivity for Legitimized Aggression Questionnaire (PLAQ), J. Rotter's Internal-External Locus of Control Scale, V. Morosanova's Style of Self-Regulation of Behavior Questionnaire [6-8].

The Buss-Durkee Aggression Inventory allows assessing the overall level of police aggression, as well as identifying the predominant forms of aggressive behavior: physical, verbal aggression, hostility, suspi-

cion, and sense of guilt. The respondents were asked to answer 75 questions by choosing one of the following options: "yes"; "probably yes"; "probably no"; "no". After receiving the respondents' answers, the sum of points for each scale was calculated according to the "key".

The Proclivity for Legitimized Aggression Questionnaire (PLAQ) is used to study aggression that is socially approved, i.e., legitimized. The use of this questionnaire makes it possible to identify legitimized manifestations of aggression and separate them from spontaneous and uncontrolled aggression. The method includes an integral indicator that can be used to draw a conclusion about a person's general tendency to legitimized aggression. The respondents were asked to answer 44 questions by choosing one of the proposed options. The conclusion about the severity of a particular trait was made as follows: up to 30 % of the total number of points – no or slight severity of the trait, above 60 % of the total number of points – a clearly expressed trait, a tendency to aggression.

The Internal-External Locus of Control Scale (J. Rotter) was used to determine the locus of control (internality/externality). This method allows us to determine the extent to which police officers are focused on their own responsibility for the consequences of their actions. The respondents were asked to evaluate 29 statements and choose one of two statements. When processing the results, the scores were summed up, taking into account the key for interpreting the research methodology. The total and maximum score for internality and externality was 23 points.

The Style of Self-Regulation of Behavior Questionnaire (by V. Morosanova) is used to determine the level of formation of an individual system of conscious mental self-regulation, which covers such key components as goal setting (planning), action programming, behavioral flexibility, independence, and evaluation of results. The method helps to determine the ability of police officers to manage their own psycho-emotional state and behavior under stress. The respondents were offered a number of statements (46 statement questions) about behavioral peculiarities. They had to choose one of four possible answers: "Correct", "Probably true", "Probably false", "Incorrect". The scores were summarized according to the key provided for interpreting the research methodology.

### ORGANIZATION OF THE RESEARCH

The research was conducted in three consecutive stages. The first stage provided for the analytical review of modern scientific sources on the issues of self-regulation, aggression, and the peculiarities of

**Table 1.** The results of the study of aggression of police officers (n = 68) and cadets (n = 72) according to the Buss-Durkee Inventory (Mean ± m), points

Type of aggressive behavior	Police officers (n = 68)		Police cadets (n = 72)		Significance of the difference	
	Level of manifestation	Mean ± m	Level of manifestation	Mean ± m	t	p
Verbal aggression	high	6.3±0.28	high	7.0±0.26	1.83	>0.05
Physical aggression	high	8.2±0.24	average	4.8±0.25	9.81	<0.001
Indirect aggression	average	4.4±0.18	average	4.3±0.17	0.40	>0.05
Suspicion	low	2.8±0.13	average	4.2±0.11	8.22	<0.001
Sense of guilt	average	3.9±0.17	average	3.8±0.16	0.43	>0.05
Irritation	average	4.2±0.15	average	4.1±0.17	0.44	>0.05
Resentment	average	4.7±0.16	average	4.5±0.15	0.91	>0.05
Negativism	low	2.0±0.13	low	2.3±0.14	1.57	>0.05
Hostility index	within norms	6.1±0.17	within norms	7.4±0.18	5.25	<0.001
Aggressiveness index	within norms	22.6±0.31	lower norm	15.5±0.26	17.55	<0.001

Note: M is the arithmetic mean; m is the standard error of the arithmetic mean; t is a Student’s t-test value; p is the statistical significance indicator  
Source: compiled by the authors of this study

police professional activities in wartime. Based on this, psycho-diagnostic methods were selected that meet the research objectives. The second stage involved diagnostic work organization with police employees – police officers and police cadets. Forms were created that contained brief instructions for each method. The testing was conducted on an individual basis in compliance with the principle of voluntariness and confidentiality. The respondents were not provided with keys for independent interpretation of the results. The third stage involved quantitative and qualitative processing of the results. Mathematical and statistical analysis, comparison of data by subgroups (police cadets and police officers), and interpretation of indicators were conducted. The organization of the research and processing of the results was carried out at the Department of Legal Psychology of the NAIA.

STATISTICAL ANALYSIS

The statistical method was used to process the experimental data obtained. For the statistical comparison of the groups of subjects, the Student’s t-test for independent samples was used. The criterion allows us to determine the difference in the mean values of the samples on the respective questionnaire scales. The reliability of the difference was set at the level of  $p < 0.05$ . All statistical analyses were performed using SPSS version 10.0 software adapted for medical and biological research.

The research was carried out in accordance with the requirements of the Regulations on academic integrity at the National Academy of Internal Affairs. This document was approved by the Academic Council of the

National Academy of Internal Affairs (protocol No. 5 of 27.03.2018) and put into effect by order of the rector of the Academy (Order No. 422 of 30.03.2018). Prior consent to participate in the study was obtained from all respondents.

RESULTS

In the course of the research, we were able to obtain relevant results and outline certain trends in the behavior of police officers with different service experiences. In particular, the results of the assessment of aggressive behavior of police officers and cadets are presented in Table 1.

According to the results of the Buss-Durkee Aggression Inventory, the average indicators of police cadets and police officers differ significantly ( $p > 0.05$ ) and correspond to the average level of expression of such forms of aggression as “Sense of guilt”, “Irritation” and “Resentment”. This level of aggression is considered to be within the normal range: its absence can limit personal development and professional effectiveness, while excessive aggression complicates social interaction and causes conflict.

The “Verbal aggression” scale revealed a high and significantly similar ( $p > 0.05$ ) level of this type of aggression in police officers (6.3 points) and cadets (7.0 points), which manifests itself in verbal reactions such as a raised tone, remarks or instructions. At the same time, police officers have a high level on the “Physical aggression” scale (8.2 points). This value is significantly ( $p < 0.001$ ) higher than that of cadets (4.8 points) by 3.4 points. This form of aggression can be used when performing the goals and tasks assigned to a police officer, in

**Table 2.** The results of the study of legitimized aggression in police officers (n = 68) and cadets (n = 72) using the PLAQ methodology (Mean ± m), points

Scale	Police officers (n = 68)		Police cadets (n = 72)		Significance of the difference	
	Level of manifestation	Mean ± m	Level of manifestation	Mean ± m	t	p
Integral scale of legitimized aggression	average	70.7±2.16	average	77.8±2.29	2.26	<0.05

Note: M is the arithmetic mean; m is the standard error of the arithmetic mean; t is a Student's t-test value; p is the statistical significance indicator

Source: compiled by the authors of this study

**Table 3.** The results of assessing internal-external locus of control in police officers (n = 68) and cadets (n = 72) by J. Rotter's method (Mean ± m), points

Scale	Police officers (n = 68)		Police cadets (n = 72)		Significance of the difference	
	Quantity, %	Mean ± m	Quantity, %	Mean ± m	t	p
Internality	78	13.9±0.51	80	14.1±0.57	0.26	>0.05
Externality	22	9.1±0.22	20	8.9±0.24	0.61	>0.05

Note: M is the arithmetic mean; m is the standard error of the arithmetic mean; t is a Student's t-test value; p is the statistical significance indicator

Source: compiled by the authors of this study

particular, the use of physical force for preventive purposes, the use of coercive measures or the protection of public order. Both groups of subjects demonstrated a low and significantly similar ( $p > 0.05$ ) level on the "Negativism" scale, which is manifested in the absence of a tendency to protest or demonstratively deny the established norms.

When summarizing the results, it was taken into account that irritation, physical, indirect and verbal aggression form the aggression index, while resentment and suspicion form the hostility index. The norm of aggression is considered to be the value of its index equal to  $21 \pm 4$  points. The hostility index should be within  $7 \pm 3$  points. The average values of the hostility index of police cadets (7.4 points) and police officers (6.1 points) are within the normal range, although police cadets have a significantly higher level of this indicator ( $p < 0.001$ ) compared to officers. This may be due to age-related peculiarities, in particular, a tendency to maximalism and categorical judgments typical of the youth period, as well as the process of forming a socio-professional identity. The aggression index of police officers (22.6 points) is also within the normal range, while in cadets (15.5 points) this index is significantly ( $p < 0.001$ ) lower compared to officers and to the normative value. The higher level of aggression among officers is due to the influence of professional stressors accumulating during their service.

Thus, the presence of statistically significant differences in the scales of "Suspicion", "Hostility index", "Physical aggression", "Aggression index" indicates that police cadets demonstrate higher levels of suspicion and hostility compared to officers, which is due to age-re-

lated characteristics and the presence of rigid social attitudes in the process of their professional development. Instead, police officers show a higher tendency to physical aggression, which reflects the process of professional adaptation to the conditions of service, where the use of force is seen as a tool for responding to threatening situations.

The results of the research were further confirmed by the Proclivity for Legitimized Aggression Questionnaire (PLAQ), which aims to identify the respondents' attitudes toward socially approved (legitimized aggression), as well as to determine the forms of aggressive behavior that they consider acceptable in specific circumstances. The PLAQ methodology revealed the following results, which are presented in Table 2.

According to the results, there is a tendency for the respondents to justify aggressive behavior, to give it the status of acceptable or justified under certain circumstances. Both groups – police officers (70.7 points) and cadets (77.8 points) – showed an average level of inclination to display legitimized aggression, but there was a statistically significant ( $p < 0.05$ ) difference between them (7.1 points), which indicates a higher level of acceptability of aggressive actions among police cadets. Such an attitude may be due to psychological mechanisms of self-defense, in particular, the desire to justify their own actions in the eyes of others.

One of the key aspects in the study of aggressive behavior is to determine the level of personal responsibility for aggressive actions and to analyze the belief system that underlies the approval or denial of such manifestations. J. Rotter's Internal-External Locus of Control Scale methodology allows assessing the indi-

**Table 4.** The results of the study of self-regulation of police officers (n = 68) and cadets (n = 72) by the Style of Self-Regulation of Behavior Questionnaire (Mean ± m), points

Scale	Police officers (n = 68)		Police cadets (n = 72)		Significance of the difference	
	Level of manifestation	Mean ± m	Level of manifestation	Mean ± m	t	p
Planning	high	7.0±0.21	average	6.2±0.23	2.57	<0.05
Modeling	average	6.3±0.25	high	7.1±0.25	2.26	<0.05
Programming	average	6.1±0.20	average	6.4±0.19	1.09	>0.05
Evaluation of results	average	6.2±0.22	average	6.0±0.21	0.69	>0.05
Flexibility	average	6.3±0.19	average	7.0±0.20	2.54	<0.05
Independence	average	5.6±0.20	low	5.2±0.21	1.38	>0.05
General level of self-regulation	average	24.0±0.75	high	32.7±0.79	7.99	<0.001

Note: M is the arithmetic mean; m is the standard error of the arithmetic mean; t is a Student's t-test value; p is the statistical significance indicator

Source: compiled by the authors of this study

vidual's readiness to take responsibility for their own actions. According to the J. Rotter's Internal-External Locus of Control Scale methodology, the following results were found, which are presented in Table 3.

The directionality of the locus of control should be judged by the relative excess of the results of one dimension over the other. As you can see, the majority of the respondents, both cadets (80.0 %) and officers (78.0 %), have an internal locus of control. No significant difference was found between the indicators ( $p > 0.05$ ). This indicates that beliefs about success or failure depend on their qualifications, level of abilities and are the result of purposeful activity.

The formed system of self-regulation is a determining factor in the professional success of police officers, as it allows them to control their own behavior and use aggression only to the extent necessary and sufficient to fulfill their professional goals and tasks. To study the level of self-regulation of police officers, the Style of Self-Regulation of Behavior Questionnaire by V. Morosanova was used. It aims to study the general level of self-regulation, as well as its components: planning, modeling, programming, evaluation of results, flexibility, and independence. The results are presented in Table 4.

The average values on the questionnaire scales indicate that there are no significant ( $p > 0.05$ ) differences between police officers and cadets in terms of such indicators as programming, evaluation of results, and independence. Most of them are at the average level, which indicates the ability of both groups to consciously formulate goals, adapt to changes and effectively achieve results.

At the same time, there are significant differences in the "Planning" scale: police officers have a high level (7.0 points), while cadets (6.2 points) have an aver-

age level. This indicates a more developed ability to consciously plan professional activities among more experienced professionals, including the formation of realistic, detailed and sustainable plans. On the other hand, the cadets scored higher on the "Modeling" scale (7.1 points) compared to officers (6.3 points), which indicates a more active use of imaginative modeling of future actions. This feature may be related to educational motivation and involvement in training forms of education.

The overall level of self-regulation was significantly ( $p < 0.001$ ) higher among cadets (32.7 points) than among officers (24.0 points), which indicates a more developed ability to consciously regulate one's own behavior, plan, control and correct actions among younger respondents. The lower level of self-regulation among police officers may be the result of psycho-emotional exhaustion that accompanies their professional activities. Police officers are also characterized by a significantly lower level of flexibility ( $p < 0.05$ ) compared to cadets, which is manifested in uncompromising, clear and consistent performance of duties, relying on established algorithms of action. This potentially reduces adaptability in non-standard or stressful situations requiring a variable approach.

Summarizing the results of the research, it should be noted that there are significant differences in the manifestation of aggressive behavior between police officers and police cadets. Higher indicators on the "Suspicion" and "Hostility index" scales among cadets indicate a tendency to perceive the social environment as threatening, which may be due to lack of professional experience and high sensitivity to external stimuli. Police officers, on the other hand, demonstrate higher levels of physical aggression and general aggression index, which is likely a consequence of prolonged professional adaptation to

extreme conditions of service, where physical response to a threat becomes functional. At the same time, officers show a lower level of mental self-regulation, in particular in terms of flexibility indicators, which shows the formation of rigid, automated response models that may not be effective in situations of uncertainty. In view of this, the results of the research necessitate the systematic development of police officers' self-regulation skills as a critical resource for maintaining emotional stability, ensuring professional efficiency and preventing destructive behaviors in armed conflict.

## DISCUSSION

The armed conflict in Ukraine has significantly complicated the conditions of police officers' professional activities, leading to an increase in psychological stress, the risk of emotional exhaustion and the likelihood of destructive behavioral reactions. A number of studies have shown that chronic professional stress correlates with increased anxiety, emotional instability, and reduced self-control, which creates prerequisites for aggression [4, 8, 9]. In particular, Staller, Müller, and Yan Wang found that mental exhaustion significantly reduces the ability to self-regulate, increasing the risk of impulsive use of force [11, 12]. The findings of our research are consistent with these conclusions: police officers demonstrate a higher tendency to physical aggression and lower indicators of mental self-regulation compared to cadets, which may indicate manifestations of psycho-emotional exhaustion in the process of professional adaptation.

At the same time, in times of war, psychological challenges are typical not only for practicing officers, but also for cadets undergoing professional training. Thus, according to the study, academic stressors in wartime have a negative impact on the mental health of cadets, contributing to increased anxiety, emotional stress and reduced stress resilience [13-15]. These results are partially consistent with our findings: cadets demonstrate higher levels of hostility and suspicion, which may be a consequence of increased susceptibility to potential threats in an unstable environment.

The development of self-regulation skills is central to modern approaches to increasing stress resilience and psychological stability, especially in conditions of increased professional stress. Positive results are demonstrated by neurofeedback training, resilience development programs, physical activity, and targeted psychoprophylactic interventions [5, 16-19]. The data of our empirical research confirm the expediency of integrating such approaches into the system of psychological support for law enforcement activities under

martial law as a means of minimizing the risk of excessive aggression and increasing professional efficiency.

## CONCLUSIONS

Differences in the manifestations of aggression between police officers and cadets were found. In particular, the cadets demonstrated significantly ( $p < 0.001$ ) higher values on the "Suspicion" (4.2 points) and "Hostility index" (7.4 points) scales, which indicates a more pronounced tendency to interpret the social environment as potentially threatening. This tendency to distrust and emotional tension may be due to youthful age, instability of worldview standpoints, and rigidity of social attitudes in the process of their professional development. At the same time, police officers showed significantly ( $p < 0.001$ ) higher indicators on the "Physical aggression" (8.2 points) and "Aggression index" (22.6 points) scales, which indicates a readiness to physically respond to a threat. This fact can be viewed as a consequence of professional adaptation, in which physical response is perceived as an acceptable and functional tool for performing service tasks. In this context, aggressive behavior acquires the characteristics of a normative, legitimized strategy of action, especially in times of war.

It was found that police officers have a significantly lower level ( $p < 0.05-0.001$ ) of general mental self-regulation (24.0 points) and flexibility (6.3 points) compared to cadets (32.7 and 7.0 points, respectively), which may indicate the rigidity of behavioral strategies due to adaptation to professional activities under martial law. This result reflects the influence of an educational environment focused on the development of personal potential, increased intrinsic motivation for professional growth, and the absence of a cumulative effect of professional stress. Instead, the lower level of self-regulation among officers, as well as statistically significant differences in the "Flexibility" scale, indicate the dominance of automated, rigid behavioral patterns that are formed during the period of professional adaptation.

The findings emphasize the importance of developing self-regulation skills as a key tool for preventing aggressive behavior among police officers, especially in wartime. In this regard, it is advisable to introduce targeted programs for the development of mental self-regulation into the system of psychological support for the professional activities of police officers, which will help to increase professional reliability and maintain ethical responsibility in difficult conditions of performing service duties.

## PROSPECTS FOR FURTHER RESEARCH

To study gender peculiarities of self-regulation and aggression manifestation among police officers in view of stressful situations of martial law.

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*The topic and content of the article correspond to the provisions of the priority areas of research of the National Academy of Internal Affairs within the research work for 2020-2025 under "Psychological, pedagogical and sociological support of law enforcement" (State registration number 0113U008196).*

## CONFLICT OF INTEREST

The Authors declare no conflict of interest

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**RECEIVED:** 26.02.2025

**ACCEPTED:** 21.07.2025

