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Coping Behavior of Criminal Police Officers at Different Stages of Professional Activity

Olena FEDORENKO[1], **Victoria DOTSENKO**[2], **Ivan OKHRIMENKO**[3], **Kostiantyn RADCHENKO**[4], **Daria GORBENKO**[5]

[1] Doctor of pedagogical sciences, professor, Head of the Department of Pedagogy and Psychology, Kharkiv National University of Internal Affairs, Kharkiv, Ukraine. E-mail: fei090771@gmail.com, orcid.org/0000-0003-4948-9524

[2] Candidate of psychological sciences, associate professor, Associate professor of the Department of Pedagogy and Psychology, Kharkiv National University of Internal Affairs, Kharkiv, Ukraine. E-mail: valakh@meta.ua, orcid.org/0000-0001-7757-2793

[3] Doctor in law, professor, Professor of the Department of Legal Psychology, National Academy of Internal Affairs, Kyiv, Ukraine. E-mail: ivango-07@ukr.net, orcid.org/0000-0002-8813-5107

[4] Candidate of psychological sciences, Head of the Common Military Disciplines Department, Yaroslav Mudryi National Law University, Kharkiv, Ukraine. E-mail: 2rakosta300881@ukr.net, orcid.org/0000-0002-1279-9126

[5] PhD in law, Senior research fellow of the Department of the Organization of Scientific Activity and Protection of Intellectual Property Rights, National Academy of Internal Affairs, Kyiv, Ukraine. E-mail: gorbenko.d.a@gmail.com, orcid.org/0000-0002-8403-224X

Abstract: *The results of the investigation of the peculiarities of the coping behavior and mechanisms of psychological protection of police officers at different stages of professional activity are presented in the article. The study involved 65 criminal police officers, who were divided into two groups depending on the length of service: the first group included 30 policemen of the initial professional training who were just accepted for a job in criminal police units, their length of service was 3 months (46.2%); the second group consisted of 35 officers of criminal police units with 5-15 years of service experience (53.8%). Research methods: theoretical methods involved the analysis and generalization of the provisions of social and psychological literature, classification; the empirical methods – psychodiagnostic test methods, including the questionnaire called "Professional Burnout", the questionnaire for coping strategies, the questionnaire of Life Style Index. The majority of the police officers of both groups were determined to have a low level of professional burnout. It was diagnosed that when solving complex problems, police officers use similar copings (problem-solving planning, self-control, search for social support, careful actions) and the same mechanisms of psychological defense against stress (rationalization, projection, and objection) at different stages of professional activity. A number of statistically significant correlations were found between occupational burnout rates and psychological defense mechanisms and copings.*

Keywords: *coping behavior; professional burnout; criminal police officers.*

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1. Introduction

The significant dynamics of social processes, economic instability, the need to constantly adapt to changes lead to an increased scientific and practical interest in the problem of overcoming the stress associated with the professional activity (Mendel, Fyfe & Den Heyer, 2017; Ostapovich et al., 2020). The specialists in high-risk professions (police officers, emergency response groups, miners, military officers) perform their duties under extreme conditions, and they are in a state of physical and mental stress for a considerable amount of time that can adversely affect their somatic and psychological health. The problem of stress is urgent for many branches of science: psychophysiology, medicine, sociology, psychology, economics, etc. These fields of study solve a common problem – maintaining the efficiency of professional activity (life satisfaction) in the conditions of long-lasted psychophysical stress and overwork (Mackay, 2017). The research on the problem of occupational burnout, organizational and occupational stress shows that people master complex stressful situations through coping and defense-mechanisms (Shvets et al., 2020). Scientists (Kohlström et al., 2017; Kryvolapchuk et al., 2020) note that a person chooses the way of mastering, which is more appropriate to the requirements of the situation and one's own individual characteristics: experience, emotional state, etc. The authors mention that mastering can be both fully conscious and unconscious with all transitional forms of partial and temporary awareness. Mastering is the kind of behavior used by a person to manage one's own anticipation and crisis experience. These are continuous attempts to meet the specific requirements dictated by a situation in thoughts and actions, and not only to respond but to advance, to be ready for them.

Taking into account the peculiarities of the police officers' professional activities (unpredictability, high responsibility, conflict and stressful situations, etc.), it is important to understand what psychological means police officers must master in order to overcome the difficulties of their professional activity without negatively affecting their physical and psychological health.

2. Literature Review

Under the condition of stress, a psychological adaptation of a person occurs mainly through two mechanisms: psychological defense and coping behavior (Anderson, Litzenberger & Plecas, 2002). The literature analysis made it possible to present the interpretation of coping as a way of thinking and behavior aimed at overcoming difficulties and managing stress (Hoggett

et al., 2019; Posokhova, 2016). Coping is a conscious behavior aimed at the active interaction of a subject with the situation towards changing or adapting to it (Constantinou, & Butorac, 2019; Rodina, 2009). The psychological purpose of coping behavior is to adapt a person to the requirements of the situation through purposeful behavior that allows a subject to cope with stress or difficult life situation, using informed action strategies (Schaible, 2018).

Unlike coping, the psychological defense is a special system of personality stabilization aimed at consciousness defense against unpleasant, traumatic experiences, combined with internal and external conflicts, negative states of anxiety and discomfort. The functional purpose and aim of the mechanisms of psychological defense are to weaken the internal personal conflict between the unconscious needs and demands of the external environment resulting from social interaction (Faull, 2017; Granovskaya, 2007). By weakening this conflict, defense regulates human behavior and increases stress resistance. In the case of the threat of identity integrity, the defense mechanisms are responsible for its integration and adaptation to real circumstances.

The authors (Barrett et al., 2003; Valieiev et al., 2019) highlight the following differences between defense behavior and coping. Coping is an active form of mastering that helps solve life problems, while the defense is a passive form that only protects for a certain time. When using coping, the consciousness does not return a person to a stressful situation, and when using defense behavior a person returns to the beginning of the situation after some time; the use of coping provides living in harmony. Depending on the life situation, a person may use both defense behavior and copying that are described in detail in the studies (Cochraine, Tett & Vandecreek, 2003; Haan, 1977). The authors reveal the individual characteristics of the person who uses copings, namely the purpose and choice, the flexibility of behavior, reliance on logic, the ability to take into account the opinion of other people, etc. People who use protective behavior are characterized by the rigidity of behavior, denial of reality, reliance on subjective logic, inability to take into account the point of view of others, impulsive behavior, hope that the problem will be solved itself (Khosravi, 2018).

The aim of the study is to identify the peculiarities of coping behaviors used by police officers and the mechanisms of psychological defense at different stages of their professional activity.

In order to achieve this aim, the following research objectives were set:

- to investigate the level of professional burnout of police officers at different stages of professional activity;
- to identify the peculiarities of using psychological defense mechanisms and coping behaviors by police officers at different stages of professional development;
- to compare the indicators of the professional burnout of police officers with the indicators of their defense-mechanisms and coping behavior;
- to find out the relationship between the psychological defense mechanisms of police officers and their coping behaviors models.

3. Methodology

In order to solve these tasks, the psychodiagnostic methods were used, including the Professional burnout questionnaire (Vodopyanova & Starchenkova, 2009); the Ways of Coping Questionnaire (WCQ) (Kryukova, & Kuftyak, 2007; Lazarus, & Folkman, 1984); the "SACS" questionnaire (Hobfoll, 1989; Vodopyanova & Starchenkova, 2009); the Life Style Index questionnaire (Plutchik, Kellerman & Conte, 1979; Vasserman, Yeryshev & Klubova, 2005).

The Professional burnout questionnaire, developed by N. Vodopyanova and O. Starchenkova based on the methodology of K. Maslach and S. Jackson, contains 22 statements about feelings and experiences related to performing professional activities (Vodopyanova & Starchenkova, 2009). It consists of three subscales: emotional exhaustion, depersonalization, and reduction of personal achievements. The responses are rated on a 7-point scale ranging from "sometimes" (0 points) to "always" (6 points). The high scores on the subscales of emotional exhaustion and depersonalization and low scores on the scale of personal achievements evidence the high level of professional burnout.

The Ways of Coping Questionnaire (WCQ) was developed by R. Lazarus and S. Folkman, adapted by T. Kryukova and O. Kuftyak. It is designed to identify the subject's preferred coping behaviors in difficult life situations, namely confrontation, distancing, self-control, seeking social support, accepting responsibility, escape, problem-solving planning, positive reassessment (Kryukova & Kuftyak, 2007; Lazarus & Folkman, 1984). There were 50 statements about behavior in difficult life situations presented, which the respondents should have assessed concerning the fact how often they act in such a way, wherein "never" is 0 points and "often" is 3 points. Then the intensity level of each of the eight copings was determined (0-6

points – a low intensity level, implying the adaptive option of coping; 7-12 points – the middle level, indicating the adaptive potential of an individual in the limit state; 13-18 points – the high intensity of coping, indicating the expressed maladaptation).

The "SACS" (method of S. Hobfol, adapted by N. Vodopyanova) questionnaire is designed to determine the degree of domination of some coping behavior in a complicated (stressful) situation (Hobfoll, 1989; Vodopyanova & Starchenkova, 2009). It comprises 54 statements and nine behavior types (coping strategies): assertive actions, social contact, seeking social support, cautious actions, impulsive actions, avoidance, manipulative (indirect) actions, asocial actions, aggressive actions. As a result, the comparison of the average group indices leads to the conclusion about the intensity (domination) of each of the 9 models of coping behavior of respondents.

The Life Style Index questionnaire was used to examine the extent of the application of different psychological defense mechanisms (developed by R. Plutchik, H. Kellerman, & H. R. Conte and adapted by L. Vasserman, O. Yeryshev, & Ye. Klubova). It contains 97 incentive statements and 8 subscales: displacement, regression, replacement, denial, projection, compensation, hypercompensation, rationalization (Plutchik, Kellerman & Conte, 1979; Vasserman, Yeryshev & Klubova, 2005). To compare the indicators of the two groups, the mean scores and standard deviations for each scale are calculated in both groups, and then the statistical significance of the differences is estimated using the Student's t-test.

The study sample consisted of 65 police officers, who were divided into two groups depending on the length of service. The first group included 30 policemen of the initial professional training who were just accepted for a job in criminal police units, their length of service was 3 months (46.2%); the second group consisted of 35 officers of criminal police units with 5-15 years of service experience (53.8%). The research was conducted in the Kharkiv National University of Internal Affairs **(**Kharkiv**,** Ukraine) in 2017-2019.

Mathematical and statistical analysis were used in processing the results of the study, including φ – F-test to identify statistically significant differences in the percentages of the compared indicators between study groups; calculating the measure of central tendency (mean) and magnitude (standard deviation); t-test for independent samples; Spearman's rank correlation coefficient.

The research was carried out according to the requirements of the Code of Ethics of Kharkiv National University of Internal Affairs. Informed

consent was received from all individuals who took part in this research and who could refuse participation at any time.

4. Results

The work presents one of the directions of psychological support for the professional activity of police officers and emphasizes the formation and development of police officers' ability to manage stress through a variety of coping strategies. The authors emphasize that an adverse reaction to occupational stress can be manifested in the form of occupational burnout syndrome that is personal deformation as a result of emotionally complicated or strained relationships in the "person-person" system and is developed over time (Gül, & Delice, 2011). Taking into consideration that the professional activity of police officers is accompanied by the maximum in volume and intensity physical and mental activities, complexity and variety of tasks in the conditions of shortage of time and information, force majeure situations, risk, emotional communication with different layers of the population, we diagnosed the level of the professional burnout of police officers with varying length of service (Table 1).

Most police officers of both the first (60%) and the second (68.6%) groups were identified to have a low level of emotional exhaustion. 33.3% police officers of the first group and 25.7% police officers of the second group were determined to have a middle level. It was found out that the smallest number of police officers of both the first (6.7%) and the second (5.7%) groups felt emotional and physical exhaustion, indifference towards others.

Table 1. The level of the professional burnout of police officers with varying length of service (%)

The indicators of professional burnout	The level	The first group	The second group	$\varphi_{емп}$	p_{1-2}
Emotional exhaustion	law	60.0	68.6	0.72	-
	middle	33.3	25.7	0.67	-
	high	6.7	5.7	0.15	-
Depersonalization	law	93.3	65.7	2.92	0.01
	middle	6.7	31.4	2.68	0.01
	high	-	2.9	1.36	-
The reduction of personal achievements	law	100.0	82.9	3.43	0.01
	middle	-	17.1	3.43	0.01

	high	-	-	-	-
	law	96.7	85.7	1.63	-
Professional burnout	middle	3.3	5.7	0.46	-
	high	-	8.6	2.38	0.01

Legend: p_{1-2} – significance of difference between the indicators of the first and the second groups

Depersonalization, as social exclusion, reduced contact with others, irritation and intolerance in communication situations, was of a low level for the majority of police officers of both the first (93.3%) and the second (65.7%) groups. In addition, the number of police officers, just accepted for a job, who did not experience social exclusion and negativity towards other people (93.3%), was 27.6% higher, in comparison to police officers with 5-15 years of service experience (65.7%). It was also determined that police officers with 5-15 years of service experience (31.4%) mostly had a statistically significant ($p \leq 0,01$) average level of depersonalization, in comparison to police officers who were at the beginning of their service (6.7%). 2.9% police officers of the second group were determined to have a high level of depersonalization. It was defined that 100% police officers were professionally motivated, successful, and positive about their further professional activity at the beginning of the service, in comparison to 82.9% police officers with 5-15 years of service experience. The reduction of personal achievements was of the middle level for 17.1% police officers of the second group. Generally, a low level of professional burnout was diagnosed for most police officers of both the first (96.7%) and the second (85.7%) groups. 3.3% police officers of the first and 5.7% police officers of the second group had a middle level of occupational burnout. It was diagnosed that police officers with 5-15 years of experience more likely had a high level of professional burnout than the police officers at the beginning of their service.

The peculiarities of coping behavior were determined using two methodologies. Table 2 presents the results of diagnostics by the methods of coping strategies (WCQ). It was established that the following copings were most commonly used by police officers at the beginning of the service: problem-solving planning (12.97 c.u.), self-control (12.17 c.u.), and positive reevaluation (11.27 c.u.), and search for social support (10.37 c.u.). The police officers with 5-15 years of service experience mostly used the following copings: problem-solving planning (11.83 c.u.), self-control (10.43 c.u.), and search for social support (10 c.u.). At the level of statistical significance ($p \leq 0,05$), it was determined that at the beginning of the service, police officers (12.17 c.u.) tended to have self-control, purposefully

restrain emotions and control their own behavior, in comparison to police officers with 5-15 years of experience (10.43 c.u.). It was designated that the police officers of the first group (11.27 c.u.) used positive reevaluation to overcome negative experiences in solving problems more than police officers with 5-15 years of experience (8.91 c.u.).

Table 2. The peculiarities of the coping behavior of police officers (Mean±SD), c.u.

Copings	The first group	The second group	t	p_{1-2}
Confrontation coping	8.23 ± 2.34	7.37 ± 2.06	1.58	-
Distancing	8.13 ± 2.87	7.89 ± 2.91	0.34	-
Self-control	12.17 ± 3.30	10.43 ± 3.24	2.74	0.05
Search for social support	10.37 ± 2.19	10.00 ± 2.57	0.61	-
The acceptance of responsibility	6.03 ± 2.57	7.23 ±3.42	1.57	-
Escape	7.27 ± 2.79	6.20 ± 3.31	1.39	-
Problem-solving planning	12.97 ± 2.50	11.83 ± 3.11	1.61	-
Positive reevaluation	11.27 ± 2.59	8.91 ± 2.96	3.38	0.001

Legend: Mean – arithmetical average; SD – standard deviation; t – meaning of t-test; p_{1-2} – significance of difference between the indicators of the first and the second groups

The analysis conducted shows that police officers use similar copings to solve complex problems at various stages of professional development. Thus, police officers tend to a purposeful analysis of the situation and possible behaviors, planning their own actions, taking into account objective conditions, personal and collective experience and available resources in stressful situations at the beginning of the service. They strive for self-control and restraint of emotions. The positive reevaluation of the situation will help to minimize the influence of emotions on the perception of the situation and the choice of behavior strategy. Police officers with 5-15 years of service experience will solve problems by planning, suppressing emotional feelings and attracting external (social) resources, information search, emotional and effective support.

Table 3 presents the results of diagnostics by the "SACS" questionnaire, which allowed us to determine that the police officers most frequently use the following coping behaviors at the beginning of the service: assertive actions (23.17 c.u.), social contact 22.23 c.u.), cautious actions (21.03 c.u.).

Table 3. The peculiarities of the coping behavior of police officers at different stages of service (Mean±SD), c.u.

The model of behavior	The first group	The second group	t	p_{1-2}
Assertive actions	23.17 ± 3.91	20.11 ± 3.13	2.35	0.05
Social contact	22.23 ± 3.52	23.66 ± 2.83	1.81	-
Search for social support	20.77 ± 4.46	23.34 ± 3.99	2.46	0.05
Cautious actions	21.03 ± 3.92	22.26 ± 2.89	1.45	-
Impulsive actions	16.67 ± 3.76	17.74 ± 2.38	1.40	-
Avoidance	14.03 ± 3.44	15.83 ± 3.06	2.23	0.05
Manipulative actions	19.70 ± 4.34	19.09 ± 3.18	0.66	-
Asocial actions	17.63 ± 5.34	17.49 ± 3.54	0.13	-
Aggressive actions	14.60 ± 5.23	15.60 ± 4.17	0.86	-

Legend: Mean – arithmetical average; SD – standard deviation; t – meaning of t-test; p_{1-2} – significance of difference between the indicators of the first and the second groups

At the same time, police officers of the first group use assertive actions, which are the ability of a person not to depend on external influences and assessments, independently regulate one's own behavior and bear responsibility for it, more often than police officers of the second group. Police officers who served for 5 to 15 years tend to social contact (23.66 c.u.), search for social support (23.34 c. u.), and cautious actions (22.26 c.u.). The ability to find support from others (family, friends, colleagues) in difficult situation, attempts to solve problems by attracting external (social) resources, finding information, emotional and effective support is more common for police officers with 5-15 years of service experience (23.34 c.u.) than for police officers at the beginning of service (20.77 c.u.).

Thus, solving complex problems, police officers demonstrate confident behavior, control over their lives, social orientation, the ability to solve problems in cooperation with others at the beginning of the service. Besides, they strive to avoid the risk of failure, tend to long-term analysis of the options for solving the problem and its possible consequences. Police officers with 5-15 years of service experience are more likely to work together to achieve their goals and need the support of others.

The results of determining the mechanisms of psychological defense, using the Life Style Index questionnaire, are presented in Table 4. It should be noted that the police officers of both groups used the same psychological defense mechanisms. The following mechanisms dominated in the first group of police officers: rationalization (6.23 c.u.), projection (5.33 c.u.) and

objection (5.03 c.u.); in the second group of police officers: rationalization (8.03 c.u.), projection (7.06 c.u.) and objection (4.51 c.u.). At the same time, it was determined that rationalization (8.03 c.u.) and projection (7.06 c.u.) were statistically significantly higher among police officers with 5-15 years of service experience, in comparison to police officers at the beginning of their service. On this basis, we state that police officers tend to rationalization, that is, a logical, reasonable explanation of their own or other's behavior, attempts to reduce the value of inaccessible experience at various stages of service. They attribute the unconscious and unacceptable feelings and thoughts to other people. And they tend not to accept and deny the circumstances that are alarming.

Table 4. The peculiarities of the mechanisms of the psychological defense of police officers (Mean±SD), c.u.

Psychological defense	The first group	The second group	t	p_{1-2}
Displacement	3.17 ± 1.51	3.60 ± 1.67	1.09	-
Regression	3.43 ± 2.27	3.63 ± 2.22	0.35	-
Substitution	1.80 ± 1.52	1.49 ± 1.58	0.81	-
Objection	5.03 ± 1.77	4.51 ± 1.31	1.35	-
Projection	5.33 ± 2.54	7.06 ± 2.29	2.88	0.05
Compensation	3.83 ± 2.12	3.54 ± 2.31	0.53	-
Hyper compensation	2.33 ± 1.42	1.74 ± 1.48	1.63	-
Rationalization	6.23 ± 2.28	8.03 ± 1.40	3.88	0.001

Legend: Mean – arithmetical average; SD – standard deviation; t – meaning of t-test; p_{1-2} – significance of difference between the indicators of the first and the second groups

The police officers of the first group were identified to have five statistically significant relationships between coping behaviors and occupational burnout (Table 5).

Thus, the desire for interpersonal relationships, cooperation to achieve common goals are statistically significantly associated with emotional exhaustion ($r_s = 0.393$; $p \leq 0.05$); manipulative actions when solving complex problems are correlated with emotional exhaustion ($r_s = 0.419$; $p \leq 0.05$) and depersonalization ($r_s = 0.499$; $p \leq 0.001$); distancing, that is, taking some cognitive efforts to reduce the value or disassociate oneself from the problematic situation, is related to professional burnout ($r_s = 0.409$; $p \leq 0.05$). The reverse correlation ($r_s = -0.450$; $p \leq 0.05$) was found between copying avoidance and defense behavior called "the reduction of personal data". Such data indicate that the police officers of the first group statistically

significantly perceive the avoidance of problem-solving as a decrease in the value of their own activity.

Table 5. Relationships between coping behaviors and burnout indicators of the police officers of the first group (r_s)

Coping behavior	The indicators of professional burnout			
	Emotional exhaustion	Depersonalization	The reduction of personal achievements	Professional burnout
Confrontation coping	-.066	-.014	.141	-.126
Distancing	.287	.269	-.012	**.409***
Self-control	.090	-.077	-.042	.056
Social support search	.105	-.039	.102	.003
The acceptance of responsibility	-.058	-.247	-.212	-.159
Escape	.227	.144	.011	.058
Problem-solving planning	.133	.131	-.069	.150
Positive reevaluation	.195	.144	-.076	.200
Assertive actions	-.239	.095	.211	-.197
Social contact	**.393***	.169	-.136	.245
Cautious actions	-.091	-.069	.122	.009
Impulsive actions	-.080	-.079	-.129	-.029
Avoidance	.100	-.114	**-.450***	-.034
Manipulative actions	**.419***	**.499****	.248	.268
Asocial actions	-.124	.238	.309	-.012
Aggressive actions	.145	.081	-.103	.234

*Legend: r_s – Spearman's correlation coefficient; *$p \leq 0.05$; **$p \leq 0.001$*

The police officers of the second group were identified to have nine statistically significant relationships between coping behaviors and occupational burnout (Table 6).

Emotional exhaustion has two reverse correlations with assertive (r_s = -0.375; $p \leq 0.05$) and impulsive (r_s = -0.344; $p \leq 0.05$) actions and a direct correlation with avoidance (r_s = 0.348; $p \leq 0.05$). It can be stated that confident, active, socially-oriented behavior and ill-considered impulse-based decision-making by police officers who are at the beginning of the service are associated with a low level of emotional, physical and energy exhaustion. While copying of avoiding problem-solving is related to irritation, indifference to others. Depersonalization, that is the reduction of contacts, social exclusion has a direct correlation with purposeful restraint of emotions, minimization of their influence on perception of a situation and the choice of strategy of behavior (r_s = 0.375; $p \leq 0.05$) and with positive reevaluation of a problem situation (r_s = 0.385; $p \leq 0.05$). The reduction of personal data is positively correlated with distancing (r_s = 0.377; $p \leq 0.05$) and it has a reverse correlation with aggressive actions (r_s = -0.340; $p \leq 0.05$). Therefore, having positive professional motivation, the police officers do not tend to aggressive actions but take cognitive efforts to distance from the problem situation. A direct correlation between professional burnout and avoidance (r_s = 0.374; $p \leq 0.05$) and a reverse correlation between assertive action and professional burnout (r_s = -0.398; $p \leq 0.05$) were established. Thus, the police officers' with 5-15 years of service experience resistance to professional burnout is associated with their confident, active, socially-oriented behavior. While avoidance the escape from problem-solving is connected with professional exhaustion.

Table 6. Relationships between coping behaviors and burnout indicators of the police officers of the second group (r_s)

Coping behavior	The indicators of professional burnout			
	Emotional exhaustion	Depersonalization	The reduction of personal achievements	Professional burnout
Confrontation coping	-.081	.010	-.041	-.088
Distancing	-.068	-.049	**.377***	.154
Self-control	.048	**.375***	-.048	.200
Social support search	-.190	-.018	.010	-.167
The acceptance of responsibility	-.161	-.219	.194	-.120
Escape	-.166	-.036	.269	-.056

Problem-solving planning	.009	.331	-.238	.071
Positive reevaluation	-.034	**.385***	-.203	.104
Assertive actions	**-.375***	-.308	.196	**-.374***
Social contact	-.072	-.170	.051	-.124
Cautious actions	-.047	.176	.127	.121
Impulsive actions	**-.344***	-.051	.057	-.281
Avoidance	**.348***	.260	-.055	**.398***
Manipulative actions	.229	.189	-.155	.211
Asocial actions	-.035	.029	-.044	-.035
Aggressive actions	.048	.106	**-.340***	-.075

*Legend: r_s – Spearman's correlation coefficient; *p ≤ 0.05; **p ≤ 0.001*

A further study identified correlations between the mechanisms of psychological defense and burnout of the police officers at the beginning of their service. As a result, six statistically significant correlations between these indicators were designated (Table 7).

Table 7. The relationships between psychological defense mechanisms and burnout indicators of the police officers of the first group (r_s)

The mechanisms of psychological protection	The indicators of professional burnout			
	Emotional exhaustion	Depersonalization	The reduction of personal achievements	Professional burnout
Displacement	-.311	-.137	-.196	-.166
Regression	-.020	-.335	.066	-.321
Substitution	-.039	**-.377***	.263	-.325
Objection	**-.443***	-.017	.148	**-.395***
Projection	**-.367***	-.241	-.126	**-.507****
Compensation	.094	-.152	.054	-.176
Hyper compensation	-.198	-.070	-.136	-.240
Rationalization	-.085	.075	.212	-.169

*Legend: r_s – Spearman's correlation coefficient; *p ≤ 0.05; **p ≤ 0.001*

The low level of emotional exhaustion of the police officers at the beginning of the service is associated with such mechanisms of psychological defense as an objection (r_s = -0.443; $p \leq 0.05$) and projection (r_s = -0.367; $p \leq 0.05$). In addition, a low level of occupational burnout has reverse correlations with mechanisms of defense behavior such as objection (r_s = -0.395; $p \leq 0.05$) and projection (r_s = -0.507; $p \leq 0.001$). And the indicators of depersonalization have reverse correlations with a substitution (r_s = -0.377; $p \leq 0.05$) and regression (r_s = -0.375; $p \leq 0.05$). The peculiarities of defensive behavior when using the mechanisms of projection and objection are offensiveness, hostility, excessive insistence on high standards for oneself and other people, the denial of reality (both external and internal) that causes pain.

It should be noted that three statistically significant correlations were found between the indicators of the mechanisms of psychological defense and burnout in the second group (Table 8). Such a mechanism of psychological defense as objection has a direct correlation with depersonalization (r_s = 0.372; $p \leq 0.05$) and professional burnout (r_s = 0.376; $p \leq 0.05$).

Table 8. The relationships between psychological defense mechanisms and burnout indicators of the police officers of the second group (r_s)

The mechanisms of psychological protection	The indicators of professional burnout			
	Emotional exhaustion	Depersonalization	The reduction of personal achievements	Professional burnout
Displacement	.090	.007	.101	.066
Regression	.153	-.187	-.053	-.023
Substitution	.173	.114	-.095	.115
Objection	.036	**.372***	.188	**.376***
Projection	.220	-.140	-.027	.103
Compensation	-.219	-.128	.085	-.181
Hyper compensation	-.228	-.019	.138	-.095
Rationalization	-.173	**-.419***	.128	-.287

*Legend: r_s – Spearman's correlation coefficient; *$p \leq 0.05$; **$p \leq 0.001$*

Thus, a lack of awareness of certain events and emotions is associated with burnout, reduced contacts, and increased intolerance towards others in the communication process. The very act of objection

allows police officers with 5-15 years of service experience to hide their true feelings (possibly negative) by using a professional mask. Rationalization has a reverse correlation with depersonalization (r_s = -0.419; $p \leq 0.05$). The less police officers with 5-15 years of service experience are socially excluded, the more they are inclined to rationally interpret the situation.

The police officers of the first group were identified to have a number of statistically significant relationships between coping behaviors and defense mechanisms (Table 9).

Regression, as a defense against anxiety, when a person unconsciously returns to previous, less mature, and less adequate patterns of behavior, has a direct correlation with the search for social support (r_s = 0.369; $p \leq 0.05$) and problem-solving planning (r_s = 0.389; $p \leq 0.05$). Substitution, that is transferring a reaction from an inaccessible object to an accessible object, has a direct correlation with cautious actions (r_s = 0.368; $p \leq 0.05$) and a reverse correlation with distancing (r_s = -0.369; $p \leq 0.05$). Hyper compensation lets to get rid of not only a sense of one's own inferiority but also to occupy a dominant position among others by the means of achieving a significant result in any field of human activity. Therefore, it is natural that it has a reverse correlation with distancing (r_s = -0.389; $p \leq 0.05$).

Table 9. The relationships between coping behaviors and the mechanisms of psychological defense of the police officers of the first group (r_s)

Coping behavior	Psychological defense							
	Displacement	Regression	Substitution	Objection	Projection	Compensation	Hyper compensation	Rationalization
Confrontation coping	-.137	.306	.024	-.069	-.129	-.023	.228	.210
Distancing	-.060	.116	**-.369***	-.126	-.277	-.013	**-.389***	-.014
Self-control	.179	.062	-.191	-.224	.105	-.111	.062	-.207
Search for social support	-.244	**.369***	-.025	-.017	-.018	.064	-.113	.149
The acceptance of responsibility	.265	.284	-.293	-.021	-.087	-.006	.048	-.091
Escape	-.244	-.185	-.297	-.169	.026	-.086	.051	.068

Problem-solving planning	.143	**.389***	-.144	-.014	-.134	-.006	-.066	-.064
Positive reevaluation	-.154	.062	-.170	-.086	-.026	.102	-.107	.161
Assertive actions	.257	-.122	-.261	.250	.156	-.223	.268	.025
Social contact	-.291	-.066	.059	-.098	.128	.114	-.048	-.034
Cautious actions	.118	.099	**.368***	-.037	.145	.063	-.206	.017
Impulsive actions	-.123	.082	.073	.025	.220	.284	.108	.335
Avoidance	.294	.220	.040	-.108	.173	.224	.105	-.028
Manipulative actions	-.128	-.034	.251	-.226	-.044	.080	.138	.146
Asocial actions	.028	-.148	.174	.098	-.067	-.069	.002	.252
Aggressive actions	.022	-.175	.142	-.304	.045	.122	.001	-.054

*Legend: r_s – Spearman's correlation coefficient; *p ≤ 0.05; **p ≤ 0.001*

A number of statistically significant relationships between coping behaviors and psychological defense mechanisms of police officers with 5-15 years of service experience were diagnosed (Table 10). The indicators of escape and displacement ($r_s = 0.480$; $p \leq 0.001$) and avoidance and substitution ($r_s = 0.356$; $p \leq 0.05$) have a quite natural direct correlation. Five reverse correlations were established between the indicators of substitution and problem-solving planning ($r_s = -0.396$; $p \leq 0.05$) and assertive actions ($r_s = -0.428$; $p \leq 0.05$); projection and aggressive actions ($r_s = -0.360$; $p \leq 0.05$); hyper compensation and search for social support ($r_s = -0.373$; $p \leq 0.05$); rationalization and impulsive actions ($r_s = -0.336$; $p \leq 0.05$).

It is clear that transferring actions from an inaccessible object to an accessible one will not promote decision-planning and confident behavior in order to solve problem situations, and rational interpretation of the situation is impossible in the case of impulsive, ill-considered actions. The results show that no statistically significant correlation between dominant defense behavior (rationalization, projection, and objection) and copings of the police officers at the beginning of the service was established. However, there are direct statistically significant ($p \leq 0.05$) correlations between dominant copings and defense behavior: the defense of regression correlates with the coping of the search for social support and problem-solving planning; the coping of cautious actions with the defense of substitution.

Table 10. The relationships between coping behaviors and the mechanisms of psychological defense of the police officers of the second group (r_s)

Coping behavior	Psychological defense							
	Displacement	Regression	Substitution	Objection	Projection	Compensation	Hyper compensation	Rationalization
Confrontation coping	,088	-,026	,112	,006	,108	,141	,266	-,161
Distancing	,286	-,174	,049	,187	-,055	,085	-,023	,060
Self-control	,184	-,233	-,021	,237	-,051	-,157	,154	-,220
Search for social support	,029	,114	-,231	,098	-,103	,039	**-,373***	-,058
The acceptance of responsibility	,052	-,133	-,121	-,121	,168	-,143	-,219	,163
Escape	**,480****	-,075	,209	,267	,077	,330	,180	,154
Problem-solving planning	-,023	-,097	**-,396***	,120	-,053	-,299	-,168	-,303
Positive reevaluation	,282	-,115	,050	,215	-,155	,215	,232	-,222
Assertive actions	,103	,075	**-,428***	,105	-,061	-,007	,190	,100
Social contact	,136	,191	,056	,244	,198	,108	,166	-,144
Cautious actions	,063	-,165	,005	,294	-,165	-,055	-,007	-,248
Impulsive actions	,059	-,139	-,153	,112	,062	-,062	-,174	**-,336***
Avoidance	,038	,003	**,356***	,123	-,140	,147	-,007	-,235
Manipulative actions	-,015	,255	,116	,145	-,182	,231	-,020	-,065
Asocial actions	,070	,310	,155	,053	-,215	,327	,156	,171
Aggressive actions	-,075	,083	,251	,050	-,360*	,263	-,075	-,071

*Legend: r_s – Spearman's correlation coefficient; *p ≤ 0.05; **p ≤ 0.001*

The police officers with 5-15 years of service experience were defined to have a statistically significant ($p \leq 0.05$) reverse correlation between the dominant mechanism of psychological defense of rationalization and coping of impulsive actions.

5. Limits and Discussion

The psychodiagnostic techniques used in our study (Professional burnout questionnaire, the Ways of Coping Questionnaire, the "SACS" questionnaire, the Life Style Index questionnaire) are not original. They are adapted versions in Russian and Ukrainian, the use of which is authorized by Ukrainian scientists on the basis of a cooperation agreement between G. S. Kostiuk Institute of Psychology of the National Academy of Pedagogical Sciences of Ukraine and international public professional organization European Federation of Psychologists Associations (EFPA) (No. 27/134 dated 12.05.1997).

The researchers of the problem of professional deformation and burnout of law enforcement officials (Lefterov & Tymchenko, 2002; Medvedyev, 1996; Vodopyanova & Starchenkova, 2009) outlined the typical complex of symptoms of occupational deformity and burnout of law enforcement officers. In particular, they identified the features of behavior, conditioned by non-adaptive defense mechanisms and strategies of behavior (for example, the reduction of the social network, and focus on the severity of punishment as a universal way of combating crime). The results of our study showed a low level of professional burnout in the majority of police officers of both the first and second groups. At the same time, police officers with 5-15-year working experience were defined to have a high level of professional burnout more often (8.6%), in comparison to police officers who were at the beginning of their service authentically ($p \leq 0.01$). Similar data were obtained by scientists during the study of the problem of professional burnout of the workers of the National Police of Ukraine (Borysyuk & Fostyak, 2016). The authors noted that professional burnout was not widespread, not formed among most police officers with 0-5-year working experience.

Relying on stress theory and problem-oriented coping (Lazarus & Folkman, 1984), as well as the resource concept (Hobfoll, 1989), some authors emphasize that in the process of mastering difficult life (stressful) situations, multiple and unique combinations of problem-oriented and emotionally focused coping behaviors and psychological defense mechanisms (conscious and underconscious) coexist (Didukh, 2014; Dotsenko, 2014; Videnyeyev, 2015). Therefore, studying coping behavior, it is advisable to evaluate all of the three components of mastering: problem-oriented, emotionally focused, and psychological defense mechanisms. We investigated 17 types of coping behaviors (conscious ones) and 8 psychological defense mechanisms.

The results of our study of criminal police officers' coping behavior are partly in line with those of Vodopyanova & Starchenkova (2009), according to their sample of managers (250 people), the use of assertive and prosocial copings reduces the risk of professional burnout, whereas asocial actions and aggressive models are associated with emotional exhaustion and depersonalization. In addition, a survey (Videnyeyev, 2015) found that police officers choose the following copings the most often: a positive reassessment, problem-solving planning, escape, and seeking social support. In our study, the following copings are dominant: group 1 (problem-solving planning, self-control, positive reassessment, seeking social support); group 2 (problem-solving planning, self-control, seeking social support, positive reassessment). We identified the same copings, which differ only in rank places.

In general, it should be mentioned that at the present stage of the legal psychology development in Ukraine, the problem of investigating coping behaviors and psychological defense mechanisms of police officers is covered in the works of many authors (Didukh, 2014; Dotsenko, 2014; Chukhrayeva, 2016; Shvets et al., 2020; Videnyeyev, 2015). However, most studies are episodic, non-systematic, and disordered, that is why the problem is studied not sufficiently and needs updating to reflect the dynamics of modern life. The challenges of modern life require police officers to be able to actively adapt and resist stress. It is impossible to solve this problem without knowledge of the basic mechanisms of overcoming stress. Therefore, further studies of coping behaviors and psychological defense mechanisms are necessary to preserve the health of police officers of stressful professions and develop the abilities of constructive coping behaviors.

6. Conclusions

1. The majority of police officers of the first (96.7%) and the second (85.7%) groups were diagnosed to have a low level of professional burnout.

2. It is established that solving complex problems, police officers use similar copings at different stages of professional development. At the beginning of the service, these are copings of problem-solving planning, self-control, positive reevaluation, and search for social support, assertive actions, social contact, and cautious actions. The police officers with 5-15 years of service experience mostly choose problem-solving planning, self-control, search social support, social contact, and cautious actions. It is determined that police officers of both groups use the same psychological defense mechanisms: rationalization, projection, and objection.

3. It is found out that a low level of the development of professional burnout of police officers at the beginning of the service has reverse correlations with such mechanisms of psychological defense as substitution, objection, projection, and copying of avoidance, and direct correlations with coping of social contact, manipulative actions, and distancing. The indicators of burnout of the police officers with 5-15 years of service experience are reversely correlated with coping behavior of assertive, aggressive and impulsive actions and defense behavior of rationalization. The direct correlations were indicated between burnout and coping of denial, distancing, self-control, avoidance, and positive reevaluation.

4. It is determined that the defense mechanism of regression of the police officers who are at the beginning of their service activity has a direct correlation with the search for social support and problem-solving planning; defense of substitution is directly correlated with coping of cautious actions; coping of distancing is reversely correlated with defense of hyper compensation and substitution. The police officers with 5-15 years of service experience were established to have a direct correlation between coping of escape and defense of displacement, between coping of avoidance and defense of substitution; five reverse correlations were observed between the indicators of substitution and problem-solving planning and assertive actions; projection and aggressive actions; hyper compensation and search for social support; rationalization and impulsive actions.

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Conflict of Interest

The authors declare that there are no conflicts of interest.

References

Anderson, G., Litzenberger, R. & Plecas, D. (2002). Physical evidence of police officer stress. *Policing: An International Journal, 25*(2), 399-420. https://doi.org/10.1108/13639510210429437

Barrett, G. V., Miguel, R. F., Hurd, J. M., Lueke, S. B. & Tan, J. A. (2003). Practical issues in the use of personality tests in Police selection. *Public Personnel Management, 32*(4), 45-57. https://doi.org/10.1177/009102600303200403

Borysyuk, O. M., & Fostyak, M. V. (2016). Doslidzhennya syndromu profesiynoho vyhorannya u pratsivnykiv Natsional′noyi politsiyi Ukrayiny [Research of the professional burnout syndrome in the National Police of Ukraine]. *Naukovyy visnyk L'vivs'koho derzhavnoho universytetu vnutrishnikh sprav*, *2*, 102-112.

Chukhrayeva, H. V. (2016). Stresy ta dystresy v psykholohichniy diyal′nosti pratsivnykiv politsiyi [Stress and distress in psychological activity of police officers]. *Visnyk Kharkivs'koho natsional'noho universytetu*, *59*, 94-97.

Cochraine, R. E., Tett, R. & Vandecreek, L. (2003). Psychological Testing and the Selection of Police Officers National Survey. *Criminal Justice and Behavior*, *30*(5), 511-537. https://doi.org/10.1177/0093854803257241

Constantinou, A. G. & Butorac, K. (2019). An attestation of the spatiality and saliency of police culture: a cross comparison study of Croatian and Cypriot novice law enforcers. *Police Practice and Research*, *20*(1), 48-63. https://doi.org/10.1080/15614263.2018.1500281

Didukh, M. M. (2014). Stan rozvytku komponentiv konstruktyvnoyi kopinh-povedinky u pratsivnykiv orhaniv vnutrishnikh sprav [The state of development of components of constructive coping behavior in law enforcement officers]. *Problemy suchasnoyi psykholohiyi*, *26*, 129-143.

Dotsenko, V. V. (2014). Osoblyvosti kopinh-stratehiy pravookhorontsiv z riznym rivnem perezhyvannya sub′yektyvnoho chasu [Features of coping strategies of law enforcement officers with different levels of subjective time experience]. *Problemy suchasnoyi pedahohichnoyi osvity*, *42*, 218-224.

Faull, A. (2017). Police Culture and Personal Identity in South Africa. *Policing: A Journal of Policy and Practice*, *11*(3), 332-345. https://doi.org/10.1093/police/pax016

Granovskaya, R. M. (2007). Psihologicheskaya zaschita [*Psychological defense*]. Rech.

Gül, Z. & Delice, M. (2011). Police job stress and stress reduction/coping programs: the effects on the relationship with spouses. *Turkish Journal of Police Studies*, *3*(13), 19-38.

Haan, N. (1977). *Coping and defending. Process of self-environment organization*. Academic Press.

Hobfoll, S. E. (1989). Conservation of resources: a new attempt at conceptualizing stress. *American Psychologist*, *44*(3), 513-524. https://doi.org/10.1037/0003-066X.44.3.513

Hoggett, J., Redford, P., Toher, D. & White, P. (2019). Challenges for police leadership: Identity, experience, legitimacy and direct entry. *Journal of Police and Criminal Psychology*, 34, 145-155. https://doi.org/10.1007/s11896-018-9264-2

Khosravi, S. (2018). Prevention of becoming the database to a crime scene. *Postmodern Openings*, *9*(2), 101-109. https://doi.org/10.18662/po/21

Kohlström, K., Rantatalo, O., Karp, S. & Padyab, M. (2017). Policy ideals for a reformed education: How police students value new and enduring content in a time of change. *Journal of Workplace Learning*, *29*(7/8), 524-536. https://doi.org/10.1108/JWL-09-2016-0082

Kryukova, T. L. & Kuftyak, E. V. (2007). Oprosnik sposobov sovladaniya (adaptatsiya metodiki WCQ) [Questionnaire of coping methods (adaptation of the WCQ technique)]. *Journal of the Practical Psychologist*, *3*, 93-112.

Kryvolapchuk, V., Kulyk, O., Barko, V., Kalynovskyi, B. & Kosiak, N. (2020). Attitude of young people to the criminality problem in Ukrainian postmodern society. *Postmodern Openings, 11*(1Supl1), 93-115. https://doi.org/10.18662/po/11.1sup1/125

Lazarus, R. S. & Folkman, S. (1984). *Stress, appraisal and coping*. New York: Springer.

Lefterov, V. O., & Tymchenko, O. V. (2002). Psykholohichni determinanty zahybeli ta poranen′ pratsivnykiv orhaniv vnutrishnikh sprav [*Psychological determinants of the deaths and injuries of law enforcement officers*]. Donets′k: DIVS MVS Ukrayiny.

Mackay, M. (2017). Identity formation: professional development in practice strengthens a sense of self. *Studies in Higher Education, 42*(6), 1056-1070. https://doi.org/10.1080/03075079.2015.1076780

Medvedyev, V. S. (1996). Problemy profesiynoyi deformatsiyi spivrobitnykiv orhaniv vnutrishnikh sprav (teoretychni ta prykladni aspekty) [*Problems of professional deformation of law enforcement officers (theoretical and applied aspects)*]. Natsional′na akademiya vnutrishnikh sprav Ukrayiny.

Mendel, J., Fyfe, N. R. & Den Heyer, G. (2017). Does police size matter? A review of the evidence regarding restructuring police organizations. *Police Practice and Research*, *18*(1), 3-14. https://doi.org/10.1080/15614263.2015.1135399

Ostapovich, V., Barko, V., Okhrimenko, I., Yevdokimova, O., Ponomarenko, Y., Prontenko, K., Antonova, O., Sydorchuk, N., Sokolovskyi, O. & Bloshchynskyi, I. (2020). Psychological profile of successful criminal police officer. *International Journal of Applied Exercise Physiology*, *9*(3), 120-133. http://www.ijaep.com/index.php/IJAE/article/view/755

Plutchik, R., Kellerman, H. & Conte, H. R. (1979). A structural theory of ego defenses and emotions. In C. E. Izard (Ed.), *Emotions in personality and psychopathology* (pp. 227-257). Plenum.

Posokhova, Y. S. (2016). Professional self-fulfillment as a psychological problem of Police officer's effective training. *Psychological perspectives*, *28*, 235-244.

Rodina, N. V. (2009). Koping-povedenie kak psihicheskaya deyatelnost sub'ekta [Copying behavior as a mental activity of the subject]. *Vestnik Odesskogo universiteta*, *14*(6), 80-88.

Schaible, L. M. (2018). The impact of the police professional identity on burnout. *Policing: An International Journal*, *41*(1), 129-143. https://doi.org/10.1108/PIJPSM-03-2016-0047

Shvets, D., Yevdokimova, O., Okhrimenko, I., Ponomarenko, Y., Aleksandrov, Y., Okhrimenko, S. & Prontenko, K. (2020). The New Police Training System: Psychological Aspects. *Postmodern Openings*, *11*(1Supl1), 200-217. https://doi.org/10.18662/po/11.1sup1/130

Valieiev, R., Polyvaniuk, V., Antonenko, T., Rebkalo, M., Sobakar, A. & Oliinyk, V. (2019). The effects of gender, tenure and primary workplace on burnout of Ukrainian police officers. *Postmodern Openings*, *10*(4), 116-131. https://doi.org/10.18662/po/97

Vasserman, L. I., Yeryshev, O. F. & Klubova, Ye. B. (2005). Psikhologicheskaya diagnostika indeksa zhiznennogo stilya [*Psychological diagnostics of the index of life style*]. SPbNIPNI im. V. M. Bekhtereva.

Videnyeyev, I. O. (2015). Usvidomlyuvani osoblyvosti zastosuvannya kopinh mekhanizmiv v povedintsi pratsivnykiv OVS s riznymy rivnyamy profesiynoyi deformatsiyi [Aware of the peculiarities of application of coping mechanisms in the behavior of police officers with different levels of professional deformation]. *Visnyk Natsional'noho universytetu oborony Ukrayiny*, *3*(46), 49-53.

Vodopyanova, N. E. & Starchenkova, E. S. (2009). Sindrom vyigoraniya: diagnostika i profilaktika [*Burnout syndrome: Diagnosis and prevention*]. Piter.