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Creativity, change readiness and uncertainty tolerance in law enforcement officers

Liubov S. Protsyk*

Yuliia Y. Boiko-Buzyl**

Vyacheslav P. Kazmirenko***

Sofiia B. Vlasenko****

Olha V. Davydova*****

ABSTRACT

Change readiness is an important precondition for human activity and a component of the overall professional readiness. At the same time, an important component of a police officer's personality is his/her creativity, which allows him/her to make decisions successfully and effectively in the changing and uncertain conditions of law enforcement services. The research aimed at establishing the correlation between the resilience of law enforcement officers to perform duties in unforeseen circumstances and their ability to be creative in this activity. The paper empirically examines the level of manifestation and correlation of creativity, change readiness and uncertainty tolerance in law enforcement officers. The study involved a set of diagnostic techniques for assessing the level of creativity, change readiness and uncertainty tolerance. Quantitative and qualitative methods of data processing were used. Strong correlations between indicators of creativity, change readiness and uncertainty tolerance were found in law enforcement officers. The prospect of further research is to clarify the correlation between creative solutions to occupational situations, change readiness and resilience, as well as other personal characteristics of law enforcement officers. This will help to outline a more holistic portrait of law enforcement officers and make their training more effective.

KEYWORDS: mental stress; creativity; police; motivation; psychological tests.

*Candidate of Psychological Sciences, Researcher of Research Laboratory of Psychological Support, State Research Institute of the Ministry of Internal Affairs of Ukraine, Kyiv, Ukraine. ORCID: <https://orcid.org/0000-0002-5440-5826>. E-mail: protsyk15@gmail.com

**Doctor of psychological sciences, Associate Professor of Research Laboratory of Psychological Support, State Research Institute of the Ministry of Internal Affairs of Ukraine, Kyiv, Ukraine. ORCID: <https://orcid.org/0000-0002-1715-4327>. E-mail: yuliiabbz@gmail.com

*** Doctor of psychological sciences, Professor of Department of psychology of faculty of psychology of the Lviv State University of Internal Affairs, Lviv, Ukraine. ORCID: <https://orcid.org/0000-0002-3357-8517>. E-mail: li-kazmm1@ukr.net

**** Candidate of Psychological Sciences, Senior Lecturer of Department of Legal Psychology National Academy of Internal Affairs, Kyiv, Ukraine. ORCID: <https://orcid.org/0000-0002-3645-9599>. E-mail: sofiia_vlas43@ukr.net

***** Candidate of Psychological Sciences, Associate Professor of Research Laboratory of Psychological Support, State Research Institute of the Ministry of Internal Affairs of Ukraine, Kyiv, Ukraine. ORCID: <https://orcid.org/0000-0002-1349-3997>. E-mail: davydovaolga953@gmail.com

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Creatividad, disposición al cambio y tolerancia a la incertidumbre en los agentes del orden

RESUMEN

La preparación para el cambio es una condición previa importante para la actividad humana y un componente de la preparación profesional general. Al mismo tiempo, un componente importante de la personalidad de un oficial de policía es su creatividad, que le permite tomar decisiones con éxito y eficacia en las condiciones cambiantes e inciertas de los servicios de aplicación de la ley. La investigación tuvo como objetivo establecer la correlación entre la resiliencia de los agentes del orden para desempeñar funciones en circunstancias imprevistas y su capacidad para ser creativos en esta actividad. El documento examina empíricamente el nivel de manifestación y correlación de la creatividad, la disposición al cambio y la tolerancia a la incertidumbre en los agentes del orden. El estudio involucró un conjunto de técnicas para diagnosticar el nivel de creatividad, la disposición al cambio y la tolerancia a la incertidumbre. Se utilizaron métodos cuantitativos y cualitativos de procesamiento de datos. Se encontraron fuertes correlaciones entre los indicadores de creatividad, disposición al cambio y tolerancia a la incertidumbre en los agentes del orden. La perspectiva de una mayor investigación es aclarar la correlación entre las soluciones creativas para situaciones ocupacionales, la preparación para el cambio y la capacidad de recuperación, así como otras características personales de los agentes del orden. Esto ayudará a esbozar un retrato más holístico de los agentes del orden y hará que su formación sea más eficaz.

PALABRAS CLAVE: estrés mental; creatividad; policía; motivación; pruebas psicológicas.

Introduction

Modern life is accompanied by a number of negative factors, including instability, high (sometimes very fast) rate of social change in various spheres of public life, a sharp increase in the number of uncertain social situations (Basinska and Daderman, 2019). Uncertainty often manifests itself in a wide range of situations: it is both everyday life, interpersonal communication and intergroup interaction in making decisions or solving problems in educational and professional activities. In particular, police officers routinely find themselves in difficult professional environments, which is why they must have developed certain psychological qualities, where uncertainty tolerance is one of the most important (Duxbury et al., 2015; Fosse, 2019).

In particular, Barko and Ostapovych (2017) believe that work in law enforcement agencies has a number of features that determine its specifics, namely:

- 1) ambiguous and uncertain conditions of activity (which is a prerequisite for the uncertainty tolerance development);
- 2) changing and unpredictable developments;
- 3) strict working conditions (for example, strictly limited time);
- 4) a large number of different tasks;
- 5) a significant level of psychological stress in the performance of official duties,
- 6) significant influence of individual qualities of the employee on the quality of work performed;
- 7) a significant number of uncontrolled factors affecting the activities of law enforcement officers.

The aim of this paper is to investigate the possible correlation between the creativity of law enforcement officers and their resilience to unstable working conditions, as well as readiness to act under those conditions. The research objectives were the following: 1) find out the level of creativity and its components in law enforcement officers; 2) study the uncertainty tolerance and change readiness in a certain group of respondents; 3) establish possible correlations between these indicators.

1. Literature review

Kravchenko and Yuzvak (2015) point out that the most important value (especially for police officers) in today's difficult conditions is the ability to quickly navigate the situation of choice, to do it right under the conditions of uncertainty and ambiguity.

As Kleinig (1996) emphasizes, the ethics of policing should be focused on cultivating the ethical side of professionalism, that is the ability to act in a situation of uncertainty and urgency only on the basis of law and a system of moral guidelines.

Uncertainty can be a factor of stress, frustration, tension in the professional activities of a law enforcement officer, and can lead to occupational health disorders. It is obvious that tolerance to uncertainty and stress, as well as the ability to overcome them, are probably the most important psychological factors in ensuring the reliability, efficiency and success of law

enforcement officers in their professional activities (McCreary et al., 2017; Page and Jacobs, 2011).

Many scholars focused on the analysis of the concept of “uncertainty tolerance”. Psychologists study this concept using different conceptual approaches. The first approach was used in the works of Frenkel-Brunswick in 1948 and in 1949 in the study of authoritarian personality (Page and Jacobs, 2011). The second approach to the analysis of uncertainty tolerance is used in the personality trait theory in the concept of perception, which was proposed by Badner in 1962 (Barko and Ostapovych, 2017). The third approach treats uncertainty tolerance through models of rational decision-making and is based on the concept of “probability” (Kornilova, 2010).

Khilko (2016) believes that uncertainty tolerance is a complex concept that combines the concepts of tolerance and uncertainty, and contains a number of aspects: the ability to approve and reflect on the problem, even if all the facts and possible consequences are unknown; socio-psychological attitude with affective, cognitive and behavioural components; ability to work under the lack of information or its duality (that is to work creatively).

Bilopolyi and Lazarenko (2020) indicate that a psychological readiness for personal change is among the psychological phenomena that help a person to function successfully in today’s unpredictable space.

As we can see, scholars describe the concept of “uncertainty tolerance” using different approaches. This allows concluding that the phenomenon of uncertainty tolerance is a complex concept; it is necessary to use various theoretical constructs for its analysis, in particular “cognitive style”, “individual type”, “personality trait”, “risk-taking process”, “belief system”. We believe that the functioning of law enforcement agencies and their effectiveness should be based on:

- high-quality performance of duties to maintain public order and counteract crime;
- improving internal personnel management;
- understanding and taking into account the factors that affect the activities of the police in general, awareness of the importance of professional and personal growth of employees.

Given the complexity and ambiguity of interpretation of the concept of tolerance by different authors, in psychology this concept is considered in the context of different areas of research. If we try to generalize different psychological approaches, we can conclude that tolerance is embedded in three areas of the human psyche: cognitive, emotional and behavioural.

In the cognitive sphere, tolerance is responsible for a person's knowledge of the national, religious, gender specifics of native and other cultures, as well as for understanding the behavioural and communicative characteristics of different people as representatives of different cultures (Norton, 2002).

In the emotional sphere, tolerance becomes a kind of sensory response to the diversity of the world, which is expressed in empathic attitude towards people, in the desire to help everyone regardless of their status, national and other characteristics (Li, 2006).

The behavioural sphere of the human psyche is integral because it combines knowledge about the diversity of the world and attitudes toward this diversity. The behavioural component is responsible for achieving cooperation and, in essence, means a compromise solution to any problematic issues, achieving mutual assistance and mutual support (Sánchez-Teruel and Robles-Bello, 2014).

Along with uncertainty tolerance and change readiness, an important personal component of law enforcement officers is their creativity and ability to find new solutions in different situations. In the psychological concept of professionalism, Markova interprets creativity as a component of personal competence necessary for making up a superprofessional of personality (Timchenko and Samokhvalov, 2014).

Both domestic and foreign scholars have worked on the problem of creativity in psychology in different years: Guilford introduced the concept of "social intelligence", interpreting it as abilities independent from general intelligence, which are primarily related to behavioural cognition. In their research, the scholars substantiated the importance of using nonverbal materials in the study of social intelligence (Barbot et al., 2019).

The researcher interpreted creativity as a person's ability to abandon standard ways of thinking. In particular, Guilford identified six parameters of creativity:

- 1) the ability to identify and state problems;
- 2) the ability to generate a large number of non-standard ideas;

- 3) flexibility — as the ability not only to generate a variety of ideas, but also to transform them;
- 4) originality, that is the ability to respond to non-standard stimuli;
- 5) the ability to improve the object, filling it with new details;
- 6) the ability to solve unexpected problems of various kinds in a non-standard way, that is the ability to analyse and synthesise.

Guilford developed a factor theory of intelligence and thus proved that creative behaviour is, in fact, a certain sequence of human actions, namely: design, planning, invention (Derevianko, 2013). In his research, Maslow found that creativity as a constant quality of life is typical for all individuals, which are characterized by self-actualization. That is why such people can perceive everything in a new way — it is a natural way of behaviour for them (Pavlenko, 2016). In order to understand the specifics of creativity, Taylor proposed in his research to analyse the properties of the creative product in order to understand how a person can apply the experience and how it will impact human behaviour. Torrens also spent a long time researching creative thinking. In particular, the scholar collected different definitions of “creativity”, defined the metaphorical essence of the creative process, analysed intellectual abilities and their impact on human social adaptation in society, regulation of behavioural activity, etc. (Antonova, 2011; Glăveanu, 2014).

Cognitive and multifactorial approaches to the study of creativity have become especially relevant abroad. In particular, Barron (2009) in scientific research tries to reveal the essence of human creativity by creating information systems of the idea of artificial intelligence, which would help to form the creative potential of the individual.

Western scholars use a cognitive multifactorial approach, where “creativity” is primarily the ability of an individual to create a new “creative product”, this ability helps a person to adapt to new conditions in a rapidly changing environment (Chiu et al., 2019; Karwowski and Kaufman, 2017).

Despite the importance of creativity and creative abilities, these issues are insufficiently addressed and poorly covered in scientific research. In this regard, Pavlenko (2016), as a recognized researcher of this issue, notes that the fundamental spontaneity of the creative process makes it almost elusive for processing by scientific methods. This spontaneity is manifested in the inability to predict the moment of enlightenment and creative decision, and

in the uncertainty (surprises) of the subject of creativity, creative idea, which may arise out of connection with the purpose of a particular cognitive activity. Some scholars have also begun to consider creativity as the ability to create new ideas, as well as link it with the creative achievements of the individual (Shchadrykov, 2010).

Thus, we can conclude that readiness for change, uncertainty tolerance and creativity are important characteristics of the personality of a law enforcement officer. Based on the study of creativity of Szmids (2010) and his interpretation of creativity in line with openness and tolerance for ambiguity, lack of fear of the unknown, Shchadrykov (2010), who considers creativity from the standpoint of problem situations, defines it as the ability to solve many problems in constantly changing circumstances; and Khilko (2016), who views tolerance for uncertainty as the ability to work in the absence of information or its duality (that is in a creative way), we assume that indicators of change readiness, uncertainty tolerance and creativity will be related in law enforcement officers. This theoretical assumption became the basis for further empirical research.

2. Methods

The study of creativity, change readiness and uncertainty tolerance of law enforcement officers was carried out in several stages. Empirical material was collected at the first, diagnostic stage. Because of a pandemic and in order to facilitate further processing of the results, it was decided to use a remote survey method. The study involved 240 law enforcement officers of the Ukraine National Police aged 25-45. Length of service of the subjects — from several months to 10 years, women made up 30% of the group. The following techniques were used:

1) Badner's Uncertainty Tolerance Questionnaire (BUT), which was adapted for the National Police of Ukraine. In addition to the general scale of uncertainty tolerance, it contains subscales that allow determining the main factor of this tolerance — the novelty, complexity or unsolvability of the problem.

2) Questionnaire "Personal change readiness", which includes 6 scales that characterize the various components of the concept of "change readiness". Passion — indefatigability and energy; ingenuity — the ability to find new solutions to situations; optimism — belief in the best development of events, focusing on it, and not on the worst option; courage — the desire for new solutions and information; adaptability — the ability to adapt to new conditions of

the situation, to change their activities in accordance with the requirements; confidence — faith in oneself and one's own strength.

3) Diagnosis of personal creativity. Contains a general scale “creativity” and sub-scales “risk-taking”, “curiosity”, “complexity”, “imagination”. Risk-taking is manifested in the fact that the subject: will defend his/her ideas not paying attention to the reaction of others; sets high goals and will try to achieve them. Curiosity is expressed in the constant desire to obtain new information and ways to resolve situations. Complexity — focus on knowledge of complex phenomena. The “imagination” subscale reflects the level of development of the subject's imagination.

Johnson's Creativity Questionnaire allows estimating the general level of creativity of the respondents.

The second stage of the study involved processing of the questionnaires, as well as the use of quantitative and qualitative methods of data processing. Spearman's Rank correlation coefficient was chosen among the statistical methods of data processing, which allows identifying correlations between two independent traits in the same group of respondents.

The last stage was to consider the results and prospects for further research.

3. Results

It is established that law enforcement officers have a personal quality, which involves the desire for change and readiness to seek new solutions and overcome difficult situations. A high level of uncertainty tolerance was found in 65% of subjects. Instead, only 15% of surveyed law enforcement officers are not ready for changing working conditions, they seek clarity of the environment and the proposed solutions. Another 30% of respondents show an average level of uncertainty tolerance.

If we talk about the sources of uncertainty, the greatest tolerance of law enforcement officers is manifested to the novelty of the situation. There were 70% of respondents having a strong perception of changing working conditions and consider them an integral part of their work. 55% of respondents show an average level of tolerance for the complexity of the proposed situation, and the unsolvability of situations for 47.5% is partly a factor that can cause difficulties in work (average level of uncertainty tolerance).

The overall level of change readiness in 67.5% of respondents is high. More than half of law enforcement officers show a high level of self-control in situations with incomplete

information or in changing working conditions; they are calm about the lack of “ready” solutions and the need to adapt to changes (Figure 1).

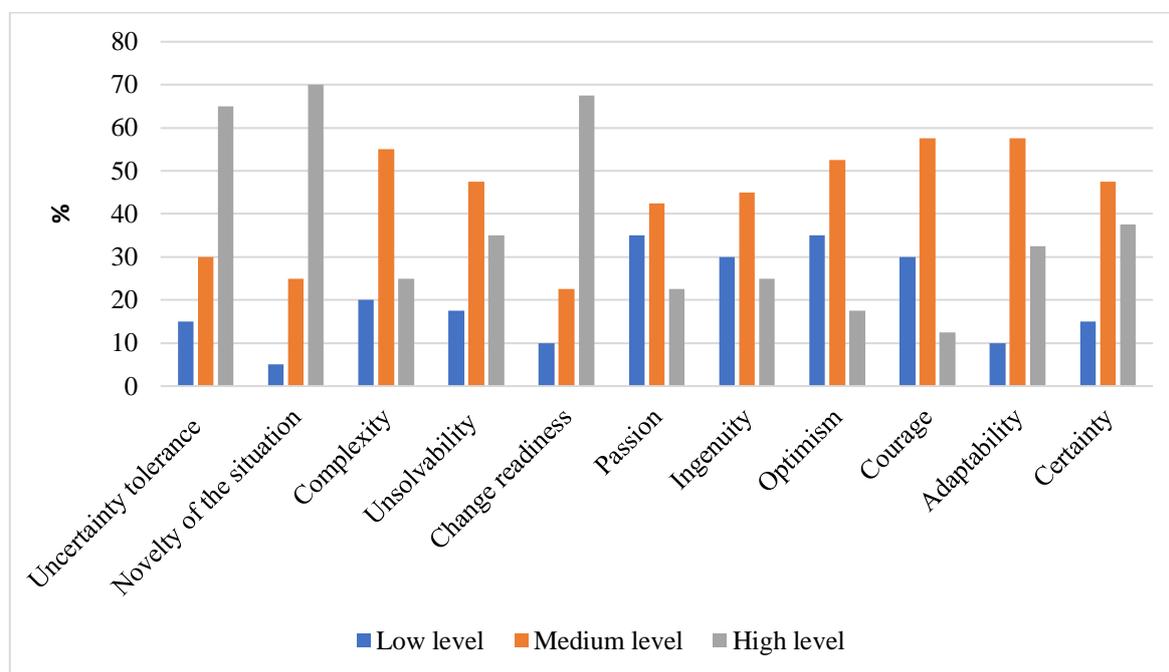


Figure 1. Distribution of the indicators of uncertainty tolerance and change readiness of law enforcement officers

Passion, which is interpreted as energy and increased vitality, is manifested at an average level in 42.5% of respondents. It should be noted that a reduced level of indefatigability was found in 35% of respondents, which may be a sign of physical and/or psychological fatigue from the work performed.

There were 25% of respondents having a high level of skills development, such as finding ways out of difficult situations and choosing new solutions to problems. In 45% of the surveyed the development of these qualities is at an average level; 35% of law enforcement officers are characterized by a low level of optimism. They tend to imagine worse scenarios than they might be, they may be stuck on the problem itself rather than looking for a way to solve it; may not believe too much in the success of the case and be pessimistic about their activities. Instead, 17.5% of the respondents have high level of indicators for this quality.

Courage as a tendency to the unknown and a tendency to abandon the usual patterns is manifested in 57.5% of respondents. They prefer to look for new solutions in unusual situations and experiment in their search. A high level of this indicator was recorded in 12.5% of law enforcement officers.

A significant part of law enforcement officers (32.5%) has a well-developed ability to quickly get used to new conditions, restructure their activities in accordance with this change, as well as to abandon their decisions if they do not meet these new conditions. Adaptability is poorly developed only in 10% of the respondents, and this quality is moderately developed in 57.5%. Self-confidence, belief in their abilities, as well as their adequate and reasonable use is typical of 47.5% of subjects. Only 15% of respondents have a low level of confidence in their own actions, and the average level of manifestation of this quality was found in 37.5% of surveyed law enforcement officers.

Diagnosis of the level of creativity of law enforcement officers allowed obtaining the following results. According to the questionnaire for the diagnosis of personal creativity, it was found that a high level of creativity is inherent in 52.5% of respondents, which is a very significant indicator. Only 12.5% of respondents have a low level of imagination, risk-taking in certain situations and strive to navigate complex problems.

It is interesting that risk-taking was found in 67.5% of subjects. More than half of the surveyed law enforcement officers tend to defend their ideas, not to be influenced by other people's opinions, and set high goals. They strive to implement their plans, while consciously treating their mistakes and accepting them (Figure 2).

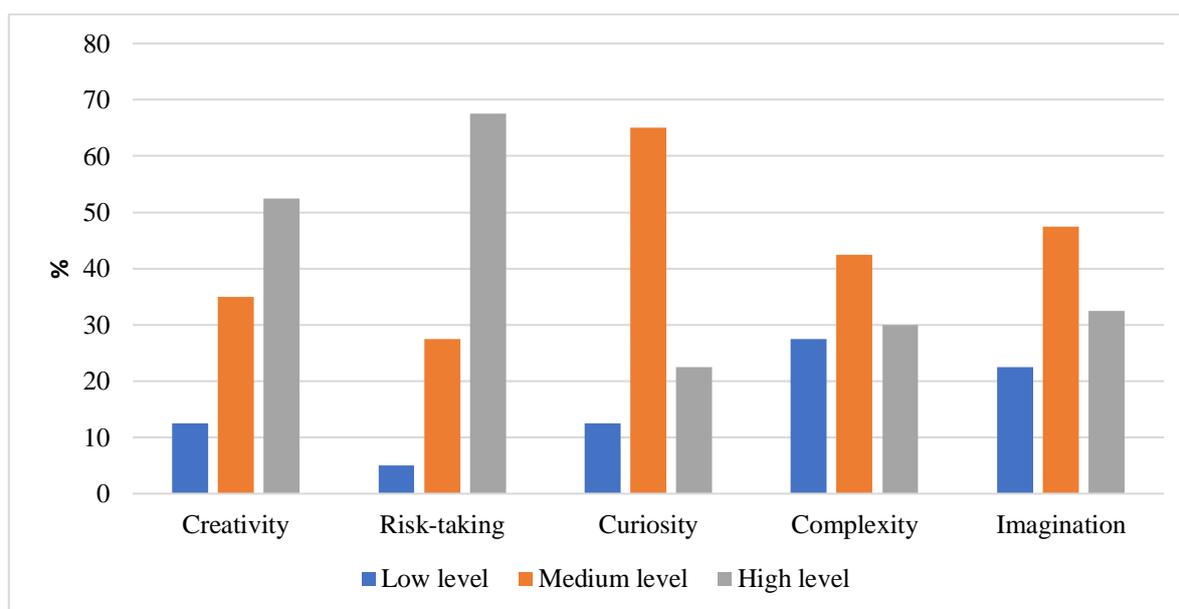


Figure 2. Distribution of indicators of creativity in law enforcement officers*

*According to the questionnaire "Diagnosis of Personal Creativity"

Instead, the curiosity of law enforcement officers is less developed. Only 22.5% of respondents have a high level of interest in the world, inclination to seek new solutions and explore the surrounding reality. The majority of respondents (65%) have an average level of this quality.

Learning complex objects, solving atypical problems and perseverance in the implementation of their own activities are typical for 30% of respondents, the vast majority of respondents (42.5%) have an average level of manifestation of this quality.

Instead, imagination, as a tendency to invent original stories, thinking about new phenomena and objects, atypical perception of objects of the surrounding reality are not very typical of law enforcement officers, as 47.5% have a low level of results on this scale, which is somewhat contradictory to other indicators of creativity.

According to the Johnson's Creativity Questionnaire, there are 5 levels of creativity — very low, low, normal/medium, high and very high (Figure 3).

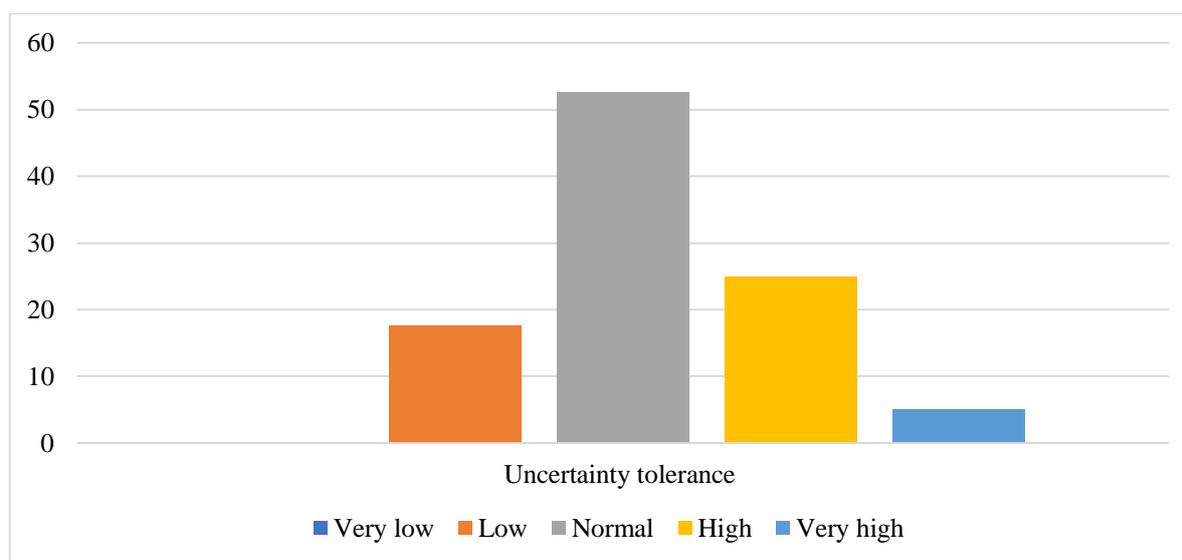


Figure 3. Distribution of creativity indicators of law enforcement officers*

*According to the Johnson's Creativity Questionnaire adapted by Ye.Ye. Tunik

It was found that the average level of creativity is inherent in 52.5% of respondents. Very low rates were not recorded in any of the respondents, low rates — in 17.5% of respondents, high — in 25% of respondents, and very high — in 5% of respondents. As we can see from the results, law enforcement officers have a medium level of propensity to seek new solutions and atypical approaches to resolving the situation. The subgroup with high

creativity rates outnumber people with a low level of creativity, which gives grounds to conclude about the medium-high level of creativity of law enforcement officers.

Spearman's Rank correlation coefficient was used to establish relationships between uncertainty tolerance, change readiness and creativity in law enforcement officers. The use of correlation analysis revealed that the level of creativity (diagnosis of personal creativity and Johnson's creativity questionnaire) of law enforcement officers directly correlates with the level of general change tolerance ($r=0.456$, $p \leq 0.001$ and $r=0.531$, $p \leq 0.001$). The more respondents tend to be creative in finding new solutions, new visions and approaches to their activities, the higher their level of self-control in situations with incomplete information or in changing working conditions; they are more relaxed about the lack of "ready" solutions and the need to adapt to change. Accordingly, the calmer law enforcement officers are about changing working conditions, the more creatively and broadly they begin to look at ways to resolve these situations.

The creativity scale (according to the Johnson questionnaire) directly correlates at a significant level with the component of uncertainty tolerance — "Novelty" ($r=0.351$, $p \leq 0.001$). As already mentioned, 70% of law enforcement officers have a high level on this subscale, and further increase or decrease of this indicator will have a corresponding effect on the level of creativity of respondents.

The analysis of the correlation between the creativity level and the components of change readiness revealed positive correlations between personal creativity level (Personal Creativity Questionnaire) and the levels of ingenuity ($r=0.513$, $p \leq 0.001$) and courage ($r=0.486$, $p \leq 0.001$). Similar significant correlations were found between the scales of "Ingenuity", "Courage" and the overall creativity level (Johnson's Questionnaire) ($r=0.392$, $p \leq 0.001$ and $r=0.506$, $p \leq 0.001$, respectively). This allows concluding that the personal change readiness and creativity of law enforcement officers are closely linked because of openness to new experiences, abandonment of proven ways out of the situation, and the ability to find a way out of difficult situations.

It was also found that general change tolerance directly correlates with the adaptability of law enforcement officers (component of personal uncertainty readiness) ($r=0.417$, $p \leq 0.001$). The higher the subjects' readiness for changes and finding new solutions and overcoming difficult situations, the more developed ability to quickly get used to new conditions,

restructure their activities in accordance with this change, as well as abandon their decisions if they do not meet these new conditions they have.

4. Discussion

Researchers note that in today's difficult conditions, the professional activities of law enforcement officers are complicated by a number of external factors, including: extreme conditions associated with special risk; high nervous and mental tension caused by various stressors; numerous situations characterized by uncertainty (DeRoma et al., 2003; Maddi, 2005). Therefore, uncertainty and change tolerance is an important feature of a law enforcement officer, which contributes to the resilience of his/her personality to stressful and changing working conditions.

The results show that law enforcement officers have a high level of desire for change, as well as a willingness to seek new solutions and overcome difficult situations. The greatest tolerance of law enforcement officers is manifested to the novelty of the situation. Tolerance for the complexity of the proposed situation and the unsolvability of this situation is moderate.

Most law enforcement officers demonstrate a high level of self-control in situations with incomplete information or in changing working conditions; they are calm about the lack of "ready" solutions and the need to adapt to changes.

Law enforcement officers also have average indicators of energy and vitality; finding ways out of difficult situations and choosing new solutions to problems, optimism; the desire for the unknown and the tendency to abandon the usual patterns; the ability to quickly get used to new conditions, to restructure their activities in accordance with this change, as well as to abandon their decisions if they do not meet these new conditions. Law enforcement officers have a high level of self-confidence, belief in their abilities, as well as their adequate and reasonable use.

More than half of the surveyed law enforcement officers tend to defend their ideas, not being influenced by other people's opinions, and set high goals. They strive to realize their plans, but at the same time they are aware of their mistakes and accept them. On the other hand, the curiosity of law enforcement officers is less developed, with the majority of respondents having a medium level of this quality.

The vast majority of law enforcement officers have an average level of knowledge of complex objects, solving atypical problems and perseverance in carrying out their own activities.

Instead, the imagination, as the tendency to invent original stories, thinking about new phenomena and objects, atypical perception of the objects of the surrounding reality are not very typical of law enforcement officers, as it is manifested at a low level. Researchers note that the creativity of the individual is inextricably linked with creative activity, it generates something qualitatively new (for the creator, for the group or for society as a whole). Scholars also interpret creativity as the ability to accomplish or in any way create something new: creativity offers a new solution to a problem, a new method of work or tool for its implementation, a new work of art, etc. (Derevianko, 2013; Preiss, 2019).

It is empirically established that the level of creativity development in law enforcement officers is medium tending to high results.

The modern world is changing rapidly and requires all people to respond quickly to new conditions and circumstances, as well as to adapt quickly to modern reality in general. It is creativity that helps a person to solve problems that arise, adapt to new changing living conditions and organize his/her activities under the conditions of uncertainty. However, as we can see from the research of other scholars, there is almost no focus on the connection between creativity and the individual's ability to effectively carry out his/her activities in constantly changing working conditions. As already mentioned, the ability to creatively solve problems is an important personality trait of law enforcement officers, while harsh working conditions and a significant number of uncontrollable factors that affect the activities are also an integral feature of their work. Therefore, the novelty of this study is identifying correlations between indicators of the ability to deal with non-standard situations, the acceptance of uncertainty and resilience to new conditions in law enforcement officers.

The application of correlation analysis allowed determining the correlation between indicators of creativity, change readiness and uncertainty tolerance in law enforcement officers. It is established that the level of creativity of law enforcement officers directly correlates with the level of general change tolerance and with the component of uncertainty tolerance —“Novelty”. Positive correlations were found between the personal creativity level and the levels of ingenuity and courage (components of change readiness).

It was also found that general change tolerance is directly related to the adaptability of law enforcement officers (a component of personal readiness for uncertainty).

Conclusion

Uncertainty tolerance, change readiness and creativity are important components of the personal competence of a law enforcement officers, which is necessary for their making up as a professional. These qualities presuppose the ability to creatively consider the initial data, generate ideas that go beyond standards and traditional schemes of thinking, promptly solve problematic law enforcement situations. Empirical research has revealed numerous correlations between indicators of uncertainty tolerance, psychological readiness for changing working conditions and the ability to creatively solve problems set for law enforcement officers. However, the study does not provide a comprehensive understanding of all possible relationships between these traits and the personal characteristics of law enforcement officers. We see the prospect of further research in further scientific analysis in the chosen direction and a deeper study of the correlation between uncertainty tolerance, change readiness, creativity and personal qualities of law enforcement officers. This will allow not only to create a more complete professional portrait of the law enforcement officer, but will also facilitate the development of professional growth programs and individual psychological assistance for law enforcement officers.

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