

CHAPTER 6

THE UKRAINIAN-SPEAKING ADAPTATION OF THE FOREIGN PSYCHODIAGNOSTIC TECHNIQUES

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INTRODUCTION

Psychodiagnostic techniques or tests (from Greek ψυχή – «soul» and διαγνωστικός – «capable of recognizing») are the psychological tools, a toolkit to identify and study the individual and psychological peculiarities of a person in order to assess its current state, forecast for further development and provision of appropriate recommendations.

There are two known ways of creating the psychodiagnostic techniques: 1) adaptation of the known tests and 2) development of new ones.

Test adaptation is a set of measures that ensure the adequacy of the test in the new conditions of use. That is, the test adaptation is required if it is used under the terms that differ from those in which its standardization was carried out and the compliance with the psychometric requirements was checked. Such conditions may relate to the age, educational, professional, national and other differences.

Realizing the significance and relevance of the problems of creating a reliable and valid psychodiagnostic complex of domestic methods, the specialists of the laboratory of psychological support at State Research Institute of the Ministry of Internal Affairs of Ukraine within the framework of cooperation with the scientists of G. S. Kostiuk Institute of Psychology of the National Academy of Educational Sciences of Ukraine started the work on the direction of the Ukrainian-speaking adaptation of foreign tests (according to the letter No. 440-01-09 dated 17.09.2018). As of today, the relevant researches have been conducted concerning the English-speaking «Big Five Test» (BFT) and the Russian-speaking «Individual-Typological Questionnaire» (ITQ).

6.1. «Big Five Inventory» adaptation

The theoretical basis of many modern psychodiagnostic techniques is a five-factor model of personality, which has become very popular in recent years. The model has been formed abroad on the basis of multi-year empirical research and currently it stimulates a significant proportion of works in the field of personal psychology. In many cross-cultural researches conducted in the English-speaking countries, as well as in Germany, France, Japan, etc., a lot of attention was paid to the content of the factors themselves, the design of tools for measuring them¹. There are no questionnaires in our country that are based on a five-factor model of personality, what in some way restricts the opportunities and reduces the effectiveness of the psychodiagnostic work of psychologists of the National Police of Ukraine.

In the domestic psychology, some of the factors similar to those of the big five were allocated by V. M. Melnykov and L. T. Yampolskyi during the scales and tasks factorization MMPI and 16 PF². At one time, L. Goldberg and A. H. Shmeliov have repeated the research made by R. Cattell on the material of Russian vocabulary; among 15 factors revealed by them, there are the same ones that are considered in five-factor model³. As a result of comparing of the English and Russian vocabulary of the personality traits, the similarity of the four most powerful factors with the factors of the «Big Five» was revealed. Results relating to the factor of «emotional stability» were less clear⁴. Currently, our country does not have any research on the Ukrainian-speaking adaptation of the questionnaires, which are based on a five-factor model of personality⁵. That is why the purpose of the article is precisely the adaptation of the English-speaking

¹ John O. P., Naumann L. P., Soto C. J. Paradigm Shift to the Integrative Big-Five Trait Taxonomy: History, Measurement, and Conceptual Issues // Handbook of personality: Theory and research / O. P. John, R. W. Robins, L. A. Pervin (Eds.). New York: Guilford Press, 2008. P. 114–158; Howard P. J., Medina P. L., Howard J. M. The Big Five locator: A quick assessment tool for consultants and trainers // The 1996 Annual. San Diego: Preiffer & Company, 1996. V. 1. P. 120–138; Pervin L. A., John O. P. Handbook of personality: Theory and research. New York: Guilford Press, 2001. Vol. 2. P. 102–138; Burlachuk L. F., Korolev D. K. Adaptatsiia oprosnika dlia diahnostiki piati faktorov lichnosti // Voprosy psikhologii. Moskva: Shkola-Press, 2000. No. 1. S. 126–135.

² Burlachuk L. F., Korolev D. K. Adaptatsiia oprosnika dlia diahnostiki piati faktorov lichnosti // Voprosy psikhologii. Moskva: Shkola-Press, 2000. No. 1. S. 128.

³ Holdberh L. R., Shmelev A. H. Mezskulturnoe issledovanie leksiki lichnostnykh chert: «Bolshaia piaterka» faktorov v anhliiskom i russkom yazykakh // Psikhologicheskii zhurnal. 1993. T. 14. No. 4. S. 35.

⁴ Burlachuk L. F., Korolev D. K. Adaptatsiia oprosnika dlia diahnostiki piati faktorov lichnosti // Voprosy psikhologii. Moskva: Shkola-Press, 2000. No. 1. S. 127.

⁵ Barko V. I. Psikhologhiia upravlinnia personalom orhaniv vnutrishnikh sprav (proaktyvnyi pidkhid): monohrafiia. Kyiv: Nika-Tsentr, 2003. S. 110.

Big Five Inventory (Big five locator questionnaire) for the usage by the National Police of Ukraine.

Let's dwell briefly on the theoretical model that describes the personality by means of five factors: extraversion, neuroticism, agreeableness, conscientiousness and openness to experience.

Neuroticism manifests itself in the sensitivity of the individual to the stressful situations. Reactive persons that are distinguished by the ease of occurrence of negative emotions are at one pole of this factor. They feel a significant number of negative experience, they are disturbing, irritating, prone to bad mood, prone to see everything on a black background, and they are less satisfied with the life than the others. At the other pole, there are individuals who have a tendency to adopt a more rational and calmer attitude towards life than the majority of people.

Extroversion is a factor that manifests itself in the focus of the external or internal world. It is commonly known that, extroverts differ in sociability, activity, impulsivity, in search for a new powerful external stimulation. They are prone to leadership, more physically and verbally active, friendly, cheerful, optimistic. Another pole of the factor is represented by the introvert, which is characterized by a tendency towards self-reliance, independence and individualism.

The openness to experience is a factor that manifests itself in the openness, susceptibility to any kind of knowledge. There is an interest both in the inner world of the person and in what is happening in the external world. People open to experience have wide interests, developed fantasy, flexible mind, originality and aesthetic sensitivity, they are attracted by everything new, unusual. They are open to new approaches, ways to solve problems. The people closed to experience are the opposite of that. They are characterized by the limited interests; such persons are taken as ordinary, conservative ones. They spend a lot of time for familiar, banal work.

Agreeableness is a measure of sociocentrism (altruism), as the opposite of egocentrism. The «conformist» is placed at the one end of this continuum, which is inclined to subordinate personal needs to the needs of the group; he accepts the rules of the group rather than insists on his own principles. Harmonious relationships with the others are more important for the conformist than the pursuit of own opinions. The other end of the continuum is represented by the uncompromising, tenacious,

«challenging» person, who is concerned with personal principles and needs.

Conscientiousness is a factor that expresses the measure of conscious control by the subject in terms of his behaviour and activity. One of its poles is represented by such qualities as high self-control, honesty, perseverance, organization, discipline, responsibility, diligence, accuracy in work, task-orientation. All these features help to focus the individual on personal and professional goals. As a result, there is a personality type that can be called «focused». Usually such individual works a lot, aimed at a career, sometimes he is a workaholic. The other pole is represented by a changeable sort of person who is easily distracted, unorganized, spontaneous, little focused on purpose; he is often a hedonist with a low level of purposeful behaviour. This is an individual who easily ends up the initiated business, weakly controls the impulses. In the middle of this continuum, there is a balanced individual, which combines the tendencies of constancy and variability⁶.

In order to diagnose these factors, many personal questionnaires were proposed. Among the most common one is the proposed by P. Costa and J. McCrae NEO-PI-R questionnaire. The authors set the task of creating a diagnostic tool that could be used in the situations requiring a fairly quick assessment of the overall structure of the individual. The questionnaire contains 240 tasks; it allows you to assess not only 5 main factors, but also 6 subordinate factors to each component. NEO-PI-R developers sought to make it as simple and easy as possible to apply⁷.

Costa and McCrae also developed a questionnaire called NEO-FFI, the new version contains 60 tasks and measures 5 main factors. Both versions (with 240 and 60 tasks) are the commercial products and can only be used with the permission of the authors. In 1999 L. F. Burlachuk and D. K. Korolev implemented Russian– and Ukrainian-speaking adaptation of the shorten version (it contains 25 tasks) of the questionnaire having received the acceptable psychometric indices of the validity and reliability⁸.

⁶ Howard P. J., Medina P. L., Howard J. M. The Big Five locator: A quick assessment tool for consultants and trainers // The 1996 Annual. San Diego: Preiffer & Company, 1996. V. 1. P. 130.

⁷ Pervin L. A., John O. P. Handbook of personality: Theory and research. New York: Guilford Press, 2001. Vol. 2. P. 102–138.

⁸ Burlachuk L. F., Korolev D. K. Adaptatsiia oprosnika dlia diahnostiki piati faktorov lichnosti // Voprosy psikhologii. Moskva: Shkola-Press, 2000. No. 1. S. 131.

Shortly, O. John, L. Nauman and S. Soto (2008) developed their version of the questionnaire called BFI («Big Five Inventory», hereinafter BFI), which consists of 44 personal characteristics and allows you to assess the personality on the basis of the above five factors. BFI contains inverted (reverse) scales, each of the factors is further divided into several personal components. The practical use of BFI by the psychologists does not require any licensing procedures⁹.

We conducted a research aimed at the Ukrainian-speaking adaptation of the BFI, which was carried out in two stages. Initially, an analysis of various variants of the translation of tasks was carried out, which allowed to select the final version of the questionnaire text. At the second stage, the reliability and validity of the BFI were checked, the nature of the association of the results with the data obtained with the help of H. Eysenck (EPI) and L. M. Sobchuk (ITQ) questionnaires, since these techniques have the similar diagnostic constructs. At this stage, the normative indicators for the surveyed sample were calculated.

The sample consisted of the students studying at the National Pedagogical University named after M. P. Dragomanov and Kharkiv National University of Internal Affairs. In the previous stage, when various versions of the translation of tasks were verified, 250 persons were examined. The sample for standardizing the Ukrainian-speaking version numbered 120 students (40 men, 80 women; the average age was 18.7 years). The sample includes students of humanitarian faculties and the cadets of faculty of law. The survey was carried out in a group form. When adapting, the features of the English-speaking original were preserved. With the help of three translators, the text of the questionnaire was developed in Ukrainian, which, on the one hand, is as closely as possible to the content of the original, and on the other hand it used the usual personal descriptors widespread in the Ukrainian language.

In the process of adaptation, the data were obtained regarding three aspects of the questionnaire reliability: test-retest reliability of parallel forms and internal consistency. Being expressed as a correlation coefficient between two consecutive tests at the interval of two weeks, for the Ukrainian speaking the test-retest reliability is as follows for the factor of neuroticism – 0.72; extraversion – 0.80; openness to experience – 0.64;

⁹ John O. P., Naumann L. P., Soto C. J. Paradigm Shift to the Integrative Big-Five Trait Taxonomy: History, Measurement, and Conceptual Issues // Handbook of personality: Theory and research / O. P. John, R. W. Robins, L. A. Pervin (Eds.). New York: Guilford Press, 2008. P. 320.

agreeableness – 0.82; conscientiousness – 0.77 ($p = 0.01$). These values correspond to the psychometric requirements.

For a part of the sample, which equally well speaks English and Ukrainian (students of the magistracy of the Faculty of Romano-Germanic Philology), the various language versions of the scale were considered as parallel forms. Correlation coefficients for the English-speaking questionnaire at the interval of two weeks were as follows: for neuroticism factor – 0.70; extraversion – 0.88; openness to experience – 0.79; agreeableness – 0.59; conscientiousness 0.85 ($p = 0.01$). Upon examination with the t-criterion, no significant differences were found between the distribution of test measurements in both forms. Upon examination no significant differences were detected using the χ^2 criterion. Therefore, the Ukrainian-speaking and English-speaking forms of the questionnaire may be considered nearly identical.

In order to check the internal consistency of the scale tasks, the Cronbach coefficient was calculated (Table 1). All the indicators can be considered as acceptable from the point of view of the requirements for psychodiagnostic tools.

Table 1

Coefficients for BFI

No.	Scale	For English-speaking language	For Ukrainian-speaking language
1	Neuroticism	0.62	0.67
2	Extroversion	0.73	0.75
3	Openness to experience	0.66	0.63
4	Agreeableness	0.68	0.70
5	Conscientiousness	0.69	0.72

The above statement indicates satisfactory reliability of the questionnaire.

In studying the validity, the respondents' answers were factorized by the method of the main components with a subsequent varimax-rotation. At the previous stage and at the standardization of the Ukrainian-speaking version of the BFI, a five-factor structure was obtained, which in its content coincided with the expected one. The percentage of the explained dispersion was 14.0; 12.8; 10.4; 7.89; 5.6 respectively for the extraversion, conscientiousness, openness to experience, agreeableness and neuroticism.

In the Ukrainian-speaking version five factors explained in total of 52.6% of the total dispersion of variables.

The constructive validity of the BFI is also confirmed by the results of correlation of data of this questionnaire with those which were obtained using the other techniques¹⁰. Thus, the predicted correlation ($r = 0.45$; $p = 0.05$) of the extraversion factor of the BFI with the extraversion scale of EPI was found. Also, BFI factors turned out to be related to some ITQ factors (Table 2). As you can see, the neuroticism correlates negatively with the scale 1 (extraversion) and factors 2 (spontaneity) and 3 (aggressiveness); whereas positive correlations are observed with the scales 5 (introversion), 6 (sensitivity) and 7 (anxiety).

Table 2

Correlation of ITQ scales and BFI factors

ITQ scales	Neuroticism	Extroversion	Openness to experience	Agreeableness	Conscientiousness
1. Extraversion	-0.44*	0.82*	0.30	-0.27	-0.22
2. Spontaneity	-0.55*	0.45*	0.12	-0.35	-0.25
3. Aggressiveness	-0.62*	0.51*	-0.22	-0.40	0.15
4. Rigidity	-0.18	-0.34	0.15	-0.41*	0.30
5. Introversion	0.38	-0.64*	-0.18	0.38	0.45
6. Sensitivity	0.40*	-0.43	0.24	0.40	0.48*
7. Anxiety	0.66*	-0.45*	0.32	0.42	0.31
8. Lability (emotionality)	0.30	0.35	0.36	0.23	0.28

*Note: $p = 0.05$; * $p = 0.01$*

Extroversion as expected positively correlates with the same scale of ITQ 1, as well as the scales 2 (spontaneity) and 3 (aggressiveness); negatively with the scales 4 (rigidity), 5 (introversion), 6 (sensitivity) and 7 (anxiety). The openness to experience is positively related to the scales 6 (sensitivity), 7 (anxiety), 8 (emotionality), although the correlation coefficients are insignificant. The agreeableness positively correlates with the scales 6 (sensitivity), 7 (anxiety); negatively with the scales

¹ Barko V. I., Kyriienko L. A., Barko V. V. Profesiyni psykhologichnyi vidbir na sluzhbu do politsii z vykorystanniam adaptovanoho individualno-typologichnoho opytuvalnyka // Pravo i bezpeka. Kharkiv: KhNUVS, 2017. № 3 (66). S. 130.

2 (spontaneity), 3 (aggressiveness), 4 (rigidity). Finally, conscientiousness is positively associated with the scales 5 (introversion), 6 (sensitivity), negatively with the scales 1 (extraversion) and 2 (spontaneity).

The distribution of «raw» points for the sample as a whole, as well as for the sub-sample of male and female, was checked for normality using the Kolmogorov–Smirnov criterion. At the significance level 0.01, the results allow us to confirm the hypothesis about the normality of the distribution of points for each of the BFI factors, both in the sample as a whole, and in each of the sub-samples. Thus, all the analysed results correspond to the law of normal distribution. The examination with the χ^2 criterion did not detect the significant differences in the answers of men and women ($p = 0.05$). Table 3 shows the keys for each of the 5 BFI scales.

Table 3

Keys to the BFI questionnaire scales

Extroversion	1	6R	11	16	21R	26	31R	36		
Agreeableness	2R	7	12R	17	22	27R	32	37R	42	
Conscientiousness	3	8R	13	18R	23R	28	33	38	43R	
Neuroticism	4	9R	14	19	24R	29	34R	39		
Openness to experience	5	10	15	20	25	30	35R	40	41R	44

Note: the letter R marks the reversed scales in which the point changes: from 5 to 1; from 1 to 5; from 4 to 2; from 2 to 4; the point 3 does not change).

The obtained results, in general, correspond to the theoretical representations existing in the psychodiagnostics. As is seen from the correlation relationships, the BFI confirms the data on the presence in the personal pattern of the respondent the sthenic or hyposthenic features of answer (extra-introversion, anxiety-aggressiveness) that can be obtained through questionnaires of Eysenck and Sobchik. At the same time, the insignificant coefficients of correlation of the factors of «openness to experience», «agreeableness», «conscientiousness» with other scales of ITQ questionnaire indicate the independent psychodiagnostic value of the BFI for the detection of these characterological features. Here is a summary of the average values and standard deviations for the scales of the Ukrainian-speaking version of the BFI (Table 4).

Table 4

Average and standard deviations for BFI scales

No.	Scale	Average	Standard deviation
1	Extroversion	33.6	5.8
2	Agreeableness	35.4	4.2
3	Conscientiousness	36.8	3.9
4	Anxiety	29.3	3.7
5	Openness to experience	38.2	6.1

6.2. Adaptation of «Individual-Typological Questionnaire»

In accordance with the methodological approach of a theory of the leading tendencies by L. M. Sobchik, an individual and personal typology is based on the contradistinction of the contrast properties that are orthogonal: introversion – extraversion, anxiety – aggressiveness, lability (emotionality) – rigidity, sensitivity–spontaneity¹¹.

These properties correlate with the parameters of the nervous system: activation – inactivation, lability – inertness, dynamics of excitation – dynamics of inhibition, strength – weakness (Fig. 1).

¹¹ Sobchik L. N. *Psikholohiia individualnosti. Teoriia i praktika psikhodiagnostiki*. Sankt-Peterburg: Rech, 2003. 624 s.

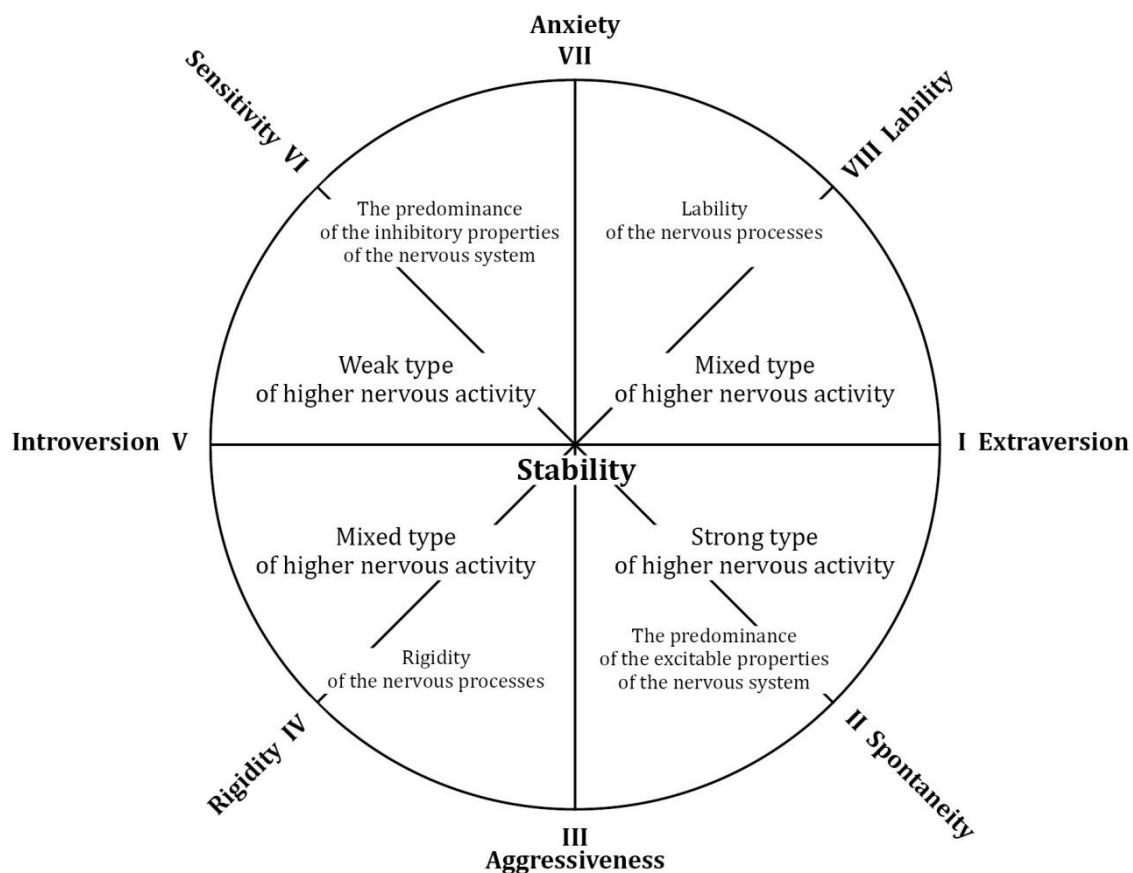


Fig. 1. Orthogonal model of personality.

The technique «Individual-Typological Questionnaire» (ITQ) allows diagnosing the individual and psychological features according to the eight basic scales: 1 – extraversion; 2 – spontaneity; 3 – aggressiveness; 4 – rigidity; 5 – introversion; 6 – sensitivity; 7 – anxiety; 8 – lability (emotional breadth). *The extraversion scale* at normative indicators indicates the orientation of the human psyche to the real world and phenomena, good communicability and activity, a tendency to contacts and acquaintances, optimism. *The scale of spontaneity* in the norm indicates the tendency for self-affirmation, active self-realization, resoluteness, courage, and the desire to defend own interests.

The aggressiveness scale subject to normativity of values indicates the search activity and a clear personal position, motivation achievements, courage and self-confidence, a high level of aspirations and a speed of decision-making. *The rigidity scale* shows such features as tidiness, stress resistance, persistence, thoroughness, practicality, position activity,

firmness to maintain its own position, straightforwardness. *The introversion scale* in the norm shows the lack of communication, modesty, passivity of a personal position, orientation at the world of internal experiences. *The sensitivity scale* in the normative indices means sensitivity to the environment, empathy, vulnerability, impressiveness (impressionability)¹², ability to sympathize and to help others. *The anxiety scale* at the moderate levels shows the caution in making decisions, responsibility, great intuition, social harmony with the environment, reflexivity and sensitivity to danger.

The lability (emotionality) scale under the normal condition of the indicators shows the increased mobility of the nervous processes, which shows itself in some emotional instability, mood variability, demonstrability, reference group dependence.

The reliability of the ITQ technique is confirmed by the processing of statistical data (Sobchuk, 2003). Reliable relationships of the ITQ indicators are confirmed by the data of correlation analysis when comparing the results of the survey with the norms of well-known tests: «Minnesota Multiphasic Personality Inventory», «Method of Colour Choices», «Method of Portrait Choices». The closest relationships were detected by the factors of introversion, extraversion, anxiety, aggressiveness, spontaneity and sensitivity (+0.84), somewhat lower are by the factors of rigidity and lability (+0.68)¹³. The questionnaire is relatively small; it contains 91 statements that are relatively simple, understandable and normally perceived without causing an anxiety in the respondents; there are also the scales of reliability.

The results interpretation depends on the number of responses for each scale: indicators *within the norm* (3–5 points) is a harmonic personality; *moderately expressed* (5–7 points) are accentuated features; *intensively expressed* (7–9 points) is a state of emotional tension, complicated adaptation; *indicators from 0 to 2 points* indicate hypoemotivity, lack of self-understanding or insincerity of the answers; *tendencies that are compensated* by the polar properties (anti-trends); if the indicators exceed 5 points, it indicates emotional tension and it is a sign of an intrapersonal conflict; *for a variant of the norm* (less than 5 points), the anti-trends are

¹² The tendency to fix and accumulate the negative experiences, the lack of a quick emotional reaction in response to the exciting events, the tendency to «keep to oneself».

¹³ Barko V. I. *Psykholohiia upravlinnia personalom orhaniv vnutrishnikh sprav (proaktyvnyi pidkhid): monohrafiia*. Kyiv: Nika-Tsentr, 2003. S. 80.

the proof of the balanced of multi-directional properties. In cases where it was scored more than 5 points according to the scales of lie and aggravation, the results are considered to be unreliable.

For the purpose of experimental study of the psychodiagnostic possibilities of ITQ technique and its restandardization, the results of the survey of the officers of the National Police of Ukraine have been used in the last two years. For testing, officers were selected who are respected in the team and who have high moral and business qualities. The testing was carried out in seven regions of Ukraine (Vinnytsia, Khmelnytskyi, Kherson, Mykolaiv, Cherkasy, Kyiv, Kharkiv); in general, 280 respondents were surveyed.

Before testing, the preparatory work was carried out: respondents were offered stimulatory materials of the questionnaire and the purpose and the aim of the test were informed, the instruction was explained. During testing, the general conditions for the premises, lighting, instructions, stimulatory material, the influence of the situational factors, etc., were observed.

An experimental study was carried out to address the issue of compliance with the basic standards of ITQ techniques, as well as the correctness of their use when testing the policemen. Initially, with the help of three translators, psychologists of the department of psychological support of the NPU and the State Research Institute of the Ministry of Internal Affairs of Ukraine, a Ukrainian-speaking version of the questionnaire was developed, the text of which is as approximate as possible to the content of the original version. In order to verify the reliability and validity of the questionnaire, the appropriate calculations were made. In the course of the Ukrainian-speaking adaptation, we obtained the data on three aspects of the reliability of the scale: retest reliability, parallel forms and internal consistency.

The retest reliability is expressed through the correlation coefficient between two consecutive tests at the intervals of 2–3 weeks; it is: for the scale (factor) 1 – 0.72; scale 2 – 0.85; scale 3 – 0.65; scale 4 – 0.81; scale 5 – 0.84; scale 6 – 0.78; scale 7 – 0.70; scale 8 – 0.83 (N = 140; p = 0.01). These values satisfy the existing psychometric requirements.

For the part of the respondents who are equally well-fluent in Ukrainian and Russian, various versions of the questionnaire were offered, which were considered as *parallel forms* (both forms consist of the same

number of tasks; they were aligned two by two in structure and content; the results obtained with their help are similar to each other). Correlation coefficients (obtained during the testing with a two-week interval) were as follows: for scale (factor) 1 – 0,70; scale 2 – 0.86; scale 3 – 0.75; scale 4 – 0.74; scale 5 – 0.81; scale 6 – 0.76; scale 7 – 0.71; scale 8 – 0.79 (N = 120; p = 0.01). Thus, the reliability of parallel forms is quite satisfactory.

When checking with the Student's t-test also no significant differences between the distribution of test indicators in both forms (Ukrainian and Russian) were recorded. No significant differences were found in the verification using the Pearson criterion χ^2 . Thus, the Ukrainian-speaking and Russian-speaking versions of the questionnaire can be considered practically as identical. In order to check the *internal consistency* of the questionnaire tasks, the α -Cronbach coefficient (Table 5) was calculated. All the obtained indicators can be considered as acceptable in the aspect of the requirements for psychodiagnostic tools. It should be noted that the coefficients are relatively small due to the insignificant number of tasks (nine) that are included in the scales of the questionnaire.

Table 5

α -Cronbach coefficients for the ITQ questionnaire

	Scale numbers							
	1	2	3	4	5	6	7	8
α	0.68	0.63	0.71	0.75	0.69	0.75	0.67	0.70

Thus, the obtained results testify to satisfactory reliability of the adapted Ukrainian-speaking questionnaire to the ITQ.

In order to investigate the *constructive validity* of an adapted ITQ, a comparison of the data obtained with the use of this questionnaire was carried out with the results of the other techniques. The predicted correlations of the scale 1 of the ITQ technique with the extraversion scale of the EPI questionnaire Eysenck, scale 7 with the neuroticism scale of the same questionnaire of Eysenck were found (r = 0.45; p = 0.05 and r = 0.41; p = 0.01 respectively). In addition, ITQ factors appeared to correlate with some scales of the SMIE questionnaire (Table 6).

Table 6

Correlation of ITQ and SMIE scales

ITQ scales	SMIE scales									
	1	2	3	4	5	6	7	8	9	0
8	0.10	-0.03	0.42**	0.20	0.20	0.11	0.34*	0.17	-0.12	0.11
1	0.03	-0.16	0.38**	0.02	0.21	0.07	-0.13	0.15	0.32*	-0.40*
2	0.10	0.06	0.16	0.31*	-0.03	0.01	0.12	0.04	0.39**	0.14
3	-0.38**	-0.32*	0.24	0.44**	-0.30	0.07	-0.25	0.20	0.30*	-0.29*
4	0.32*	0.23	-0.34*	0.25	0.10	0.40**	0.21	0.35*	0.14	0.23
5	0.31*	0.24	0.05	-0.30*	0.11	0.30*	0.13	0.40**	0.02	0.41**
6	0.22	0.45**	0.04	0.06	0.10	0.23	0.21	0.26	-0.15	0.30*
7	0.30*	0.31*	0.01	0.03	0.33*	0.25	0.46**	0.25	-0.42*	0.21

Note: * $p = 0.05$; ** $p = 0.01$. $N = 280$.

SMIE scales: 1 – overcontrol, 2 – pessimism, 3 – emotional lability, 4 – impulsivity, 5 – courage/femininity, 6 – rigidity, 7 – anxiety, 8 – individualism, 9 – optimism, 0 – introversion.

ITQ scales: 1 – extraversion; 2 – spontaneity; 3 – aggressiveness; 4 – rigidity; 5 – introversion; 6 – sensitivity; 7 – anxiety; 8 – lability (emotionality).

The correlation relationships between the ITQ and SMIE scales were detected. Scale 8 positively correlates with lability and anxiety. There is a negative correlation of scale 1 with the introversion and positive correlation with lability and optimism. Scale 2 positively correlates with the optimism and impulsivity. The negative correlations of scale 3 with overcontrol and introversion and the positive correlations with impulsivity and optimism were recorded. Scale 4 positively correlates with overcontrol, rigidity and individualism, and negatively – with the lability. There are positive correlations of scale 5 with rigidity, overcontrol and introversion, and negative – with the impulsivity. Scale 6 positively correlates with depression and introversion, and scale 7 positively correlates with overcontrol and depression and negatively – with the optimism.

The discovered relationships, generally, correspond to the existing theoretical-psychological representations, which are based on the orthogonal model of personality and the theory of leading tendencies (Sobchik). The obtained data also provides an opportunity to conclude that the socially desirable answer attitude does not significantly affect the indicators obtained according to the scales of the ITQ questionnaire. As evidenced by the absence of significant correlation coefficients between

the indicators of all eight scales with the control scales of the SMIE questionnaire ($r = 0.05-0.23$; $p = 0.01$).

In order to analyse the characteristics of the sample of police officers, they were tested. The assessments received in the process of psychodiagnostic tests were thoroughly analysed using the statistical tools. The analysis of average values, standard deviation, mode and median detected the existence of a law of normal distribution according to all of the above mentioned scales. The presence of a normal distribution law enables the use of a standard set of statistical methods for Excel and SPSS programs. Tables 7–8 shows the average and other statistical indicators by the ITQ technique obtained on the general sample.

Table 7

**Statistical data obtained during the testing of police officers
(total sample, men, $N = 210$)**

	L	F	1	2	3	4	5	6	7	8
M	3.16	0.67	5.86	5.18	5.59	3.88	3.56	3.92	4.20	5.16
σ	1.82	0.74	1.66	1.44	1.51	1.95	1.70	1.39	1.23	2.09
med.	3	0	6	5	6	4	5	4	6	6
mode	4	0	4	6	6	4	3	4	5	6

Table 8

**Statistical data obtained during the testing of police officers
(total sample, women, $N = 70$)**

	L	F	1	2	3	4	5	6	7	8
M	3.5	0.25	5.25	4.12	5.05	2.67	5.50	4.30	5.12	6.03
σ	1.57	0.45	1.35	1.67	1.54	0.67	1.65	1.10	1.60	1.78
med.	3.5	0	6.5	4.5	5	1.5	5.5	4	6	7
mode	2	0	5	5	4	1	7	6	6	6

As you can see from the tables, women show higher points according to the scales 5, 6, 7, 8, which is expected to be due to their greater sensitivity, agreeableness, compromise, and lability (emotionality) compared with the men. Also, the women scored significantly less points on scales 2, 3, 4; it indicates their less aggressiveness and rigidity.

The «raw points» distribution for the sample as a whole, as well as for the sub-sample of men and women was verified using the Kolmogorov–Smirnov criterion. The results allowed a significance level of 0.01 to conclude that the distribution of raw points is normal. It should be noted that comparing the results of testing with the ITQ technique in different police departments did not reveal the significant differences (average values are not significantly different). Thus, the obtained average indicators for the general sample can be considered as the benchmarks when testing the employees for service to all the units of the NPU. Based on our calculations, the average values for all the scales are 4.67 points, and the mean-square deviation is 1.65 points. The corridor of the average values on the scales of ITQ technique is 4.0–5.0 points. The points below and above the specified corridor are considered low and high, respectively, regardless of the educational level of the respondent.

Table 9 shows the average indicators according to the ITQ technique (general sample). The average indicators obtained on a sample of the successful police officers indicate a certain difference in the «basic» and «empirical» assessments by the ITQ technique.

Table 9

The comparison of the average indicators obtained during the process of re-standardization with the given keys for ITQ a) empirical statistical data (N = 280)

	L	F	1	2	3	4	5	6	7	8
M	3.40	0.38	<i>5.68</i>	<i>5.10</i>	<i>5.41</i>	3.85	<i>4.02</i>	3.88	<i>4.16</i>	<i>5.11</i>
σ	1.54	0.54	1.69	1.40	1.65	1.72	1.55	1.35	1.46	1.71

b) basic statistical data

	L	F	1	2	3	4	5	6	7	8
M	3.90	0.56	<i>4.43</i>	<i>4.03</i>	<i>4.10</i>	4.15	<i>5.03</i>	4.58	<i>5.05</i>	<i>4.52</i>
σ	1.67	0.47	1.75	1.02	1.15	1.33	1.78	1.69	1.50	1.80

Note: italics points out the indicators according to which the statistically significant differences are recorded (p = 0.05).

Based on the table, we should note that almost all of the ITQ scales have differences between the basic data presented in the research by L. M. Sobchuk, and those obtained as a result of the empirical research.

Thus, the average indicators on the scale 1–3 in the environment of police officers are slightly higher than the standard obtained in the social and cultural environment, which this questionnaire was created. On the other hand, according to the scales 5–8, the average indicators of police officers are statistically significantly lower than the basic ones. The results obtained do not contradict the theoretical expectations; in particular, the combination of high scores on the scale 1–3 indicates the predominance of sthenic features in police officers, which allows describing the personality of an effective policeman in the characteristics of the strength and the lability of the nervous processes, the dominance of the excitation processes. These officers have a high working capacity, distress tolerance, courage, activity, extraversion, spontaneity and resoluteness. There is also a pronounced need for communication. Such respondents are able to get in touch with strangers or virtual strangers easily and quickly; they have a significant communicative experience, while these relationships often have a superficial and short-term character. The communication may serve as an instrument of work and may solve the professional tasks for such policemen.

High average values on the scale 3 reflect the respondents' inclination to risk, the expressed motivation for achievement, the high levels of aspiration, optimism and efficiency. Extremely high scores on these scales indicate the experience, decision speed, flexibility of thinking, high learning, trickery, and creativity. At the same time, the lower average values for factors 5, 6 and 7 indicate that for the effective policemen, the features of the hyposthenic type of response like introversion, sensitivity, anxiety are not inherent. This means that they are not inclined to obey, to avoid situations in which it is necessary to assume responsibility. The low values in the factors 6 and 7 indicate the criticality when assessing the professional situations, high self-rating and self-confidence. Moderately high average scores on the scale 8 indicate certain continence, moderation, emotional maturity, realism, the ability to objectively assess the professional situations and make the informed decisions, some uncertainty of temper, etc. The obtained results, in general, coincide with the theoretically expected ones and, in our opinion, reflect the basic professionally important qualities inherent to the effective policemen.

CONCLUSIONS

Thus, the Ukrainian-speaking adaptation of the English psychodiagnostic technique «Big Five Inventory» (BFI) was carried out

(developed by O. John, L. Nauman and S. Soto (2008), as well as the Ukrainian-speaking adaptation of the Russian-speaking «Individual-Typological Questionnaire» (ITQ) (L. M. Sobchuk, 2003).

The unique approach to organize and conduct testing is given; the new standardized test norms are defined, implementation of which will increase the evaluation quality of the results of policemen testing during the competition for service in the police or occupying a vacant position; the indicators of reliability and validity of the questionnaires were calculated.

The obtained average indicators for the general sample can be considered as the benchmarks when testing officers for service in the police units. The adapted Ukrainian-speaking questionnaires are characterized by the satisfactory psychometric indicators of validity, reliability, internal consistency. The questionnaires may be used by psychologists of the National police for research purposes, in particular, in the early phases of a psychodiagnostic research for data obtaining, on the basis of which, in the future, the other diagnostic techniques are selected.

They can also be useful for the chiefs of the training groups, since the surveys conducted on their basis do not violate the logic of the training process; the results of such a survey can be the basis for a discussion and further work of the training group.

In the process of psychodiagnostic research of the persons (for example, when appointing police officers for vacancies, career promotion, etc.) along with self-assessment of candidates on the basis of these questionnaires, it is expedient to use additionally their expert assessment by filling questionnaires with heads and colleagues who are well-known to the surveyed candidates, followed by a comparison of the results of self-assessment and expert assessments.

SUMMARY

The article is devoted to the issue of Ukrainian-speaking adaptation of psychodiagnostic technique «Big Five Inventory» and «Individual-Typological Questionnaire» within the framework of improvement of the system of professional recruitment for the National Police of Ukraine. The theoretical fundamentals and the structure of the process of adaptation are described; the procedure and results of the research are revealed regarding the reliability and validity of the techniques; the normative indicators for the general sample were obtained; the new standardized test standards were determined. The results of the research proved the diagnostic verification of above mentioned questionnaires.

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