

## ADAPTATION OF THE THIRTEEN FACTOR VERSION OF CATTELL'S PERSONALITY QUESTIONNAIRE

**Rasulov Abdumumin Ibragimovich**  
PhD (Psychology), Docent  
Department of Psychology, National University of Uzbekistan  
**UZBEKISTAN**  
E-mail: abdi\_1970@mail.ru

### ABSTRACT

This article is devoted to the adaptation of R. B. Cattell's 13 PF questionnaires and is one of the first options adapted in the Uzbek environment for the first time. The problem of adaptation of the question is covered by theoretical and practical aspects of the problem. Based on the psychometric criteria of the survey adaptation. The author commented on the factors in his or her original version to adjust the query. He also commented on the factors of generality. The Uzbek version of the questionnaire is based on the foreign language teaching methodology. The reliability and validity of the customized version of the survey are based on experimental experiences. The retest rule was used to ensure the reliability of the survey. The reliability of the questionnaire was based on the criteria for assurance of excellence. For this R.B. Cattell's 13 PF survey. Correlation was found between V.M.Melnikov and L. T. Yampolsky's "Psychodiagnostic Test". Empirical data on adaptation of the questionnaire to the Uzbek environment have received positive results. According to the conclusions, the adaptation process was positive.

**Keywords:** Survey, adaptation, factor, psychometricity, reliability, retest, validity, empirical.

### INTRODUCTION

It is based on tools that enable a person to make reliable, impartial, and unbiased conclusions. This type of research is distinguished by its longstanding experience in world psychology. Over the past years, a number of personality surveys have been developed in the field of personal psychodiagnosis, adapted in a second cultural environment, and modification options have been developed. In the past, a number of forms of MMPI (Minnesota Multiphasic Personality Inventory) were adapted to the Russian environment (SMIL-Standardization Multi-Factor Study) [4], EDS, ERQ [5] and others. One of the most important research tools used for personality research in the Uzbek cultural environment is the form of a 16 PF questionnaire by R. Cattell [2,3].

Finding reliable and accurate information in research is also important in achieving time-savings. For this reason, R. Cattell has been selected for a reduced range of PF's [1]. The following features of the query were adapted:

- The ability to personally evaluate the individual;
- The level of confirmation of the questionnaire corresponds to the principles of operational and savings principles; convenience of the results processing system.

An expressive diagnosis of the questionnaire will help to investigate the characteristic of a person. 13 PF's R. B. Unlike Cattell's 16 PF original variants, it has 13 rating scales. Factors of the survey are oriented in the following way: Factors that evaluate the communicative qualities

of a person: N - courage; E - dominance; L - skepticism; N - Establishing diplomatic relations; Q<sub>2</sub> – independence.

*Intellectual Property Assessment Factors:* V - Intelligence; N - Diplomatic Approach; Q<sub>1</sub> - sensitivity to news. Factors for evaluating emotional features:

S - emotional stability; H - social relationships; I - emotional sensitivity; O - worry; Q<sub>4</sub> - Stress.

*Evaluation Factors for Regulatory Properties:* Q3-Self-Regulation; G-Responsibility to Ethical Principles.

*The dimensions of the sheets are as follows:* Factor of V-intellect evaluation. Indicators of the factor represent the following specific features.

:

*Low scores:* uncollected, stupid, specific and rigorous thinking, emotional disorganization of thinking, low mental abilities, can not solve abstract problems.

*High grades:* collected, intelligent, abstract thinking, high general mental faculties, insightful, quick grasping, intellectually adapting, there is some connection with the level of verbal culture and erudition.

Factor of S-Emotional Sustainability Factor: Individual characteristics of the factor characteristic are the following:

*Low ratings:* weakness, emotional instability, is influenced by feelings, changeable, easily upset, in disorders, loses balance of spirit, is unstable in relationships and unstable in interests, restless, evades the public, tends to yield, refuses to work, does not enter into disputes in problematic situations, neurotic symptoms, hypochondria, fatigue.

*High marks:* strength, emotional stability, consistency, calm, phlegmatic, soberly looks at things, workable, realistic, emotionally mature, has constant interests, calm, realistically assesses the situation, manages the situation, avoids difficulties, there may be emotional rigidity and numbness.

E - dominant valuation factor. Indicators of the factor represent the following specific features:

*Low ratings:* soft, gentle, obedient, obliging, amiable, dependent, shy, compliant, takes the blame, resigned, passive, submissive, obeying, tactful, diplomatic, expressive, modest, easily out of balance by authoritative management and authorities.

*High marks:* dominance, dominance, uncompromising, self-confident, assertive, aggressive, stubborn, conflicting, wayward, unstable, independent, rude, hostile, gloomy, rebel, naughty, adamant, requires admiration.

G is a factor in evaluating the adherence to ethical norms. Indicators of the factor represent the following specific features:

*Low ratings:* susceptibility to feelings, disagreement with generally accepted moral norms and standards, inconsistent, flexible, changeable, causes mistrust, condones one's desires, negligent, lazy, independent, ignores duties, is affected by the event and circumstances, unprincipled, irresponsible, unorganized, possibly antisocial behavior.

*High marks:* strong normality, strong character, conscientious, persevering, moralist, sedate, balanced, responsible, persistent, determined, trustworthy, emotionally disciplined,

collected, conscientious, has a sense of duty, respects moral standards and rules, perseverance in achieving the goal, accuracy, business orientation

H - describes the following specificities according to the factor of social accessibility:

Low ratings: shyness, indecisiveness, not confident in oneself, shyness, embarrassed in the presence of others, restrained, timid, emotional, embittered, irritated, limited, strictly adheres to the rules, quickly reacts to danger, heightened sensitivity to threat, delicate, attentive to another, prefers to be in the shade, a large society prefers one or two friends.

High marks: courage, enterprise, social courage, thick-skinned, adventurous, risk-averse, sociable, active, explicit interest in the other sex, sensitive, sympathetic, good-natured, impulsive, disinhibited, free, emotional, artistic, carefree, does not understand hazards.

The I - emotional sensitivity characteristic features the following specific features:

Low scores: low sensitivity, sternness, thick-skinnedness, does not believe in illusions, rationality, realistic judgments, practicality, some cruelty, unsentimental, expects little from life, courageous, self-confident, takes responsibility, severe (up to cynicism), callous in relationships, insignificant artistic inclinations, without loss of sense of taste, not a dreamer, acts in a practical and logical manner, permanent, does not pay attention to physical ailments.

High grades: kindness, tenderness, dependence, sensitivity, over-care, aspiration for patronage, restless, fidgety, restless, expects attention from others, obsessive, unreliable, seeking help and sympathy, capable of empathy and understanding, kind, tolerant of himself and others, refined, cutesy, pompous, feigned, inclined to romanticism, artistic, windy, acts by intuition, feminine, fantasizing in conversation and alone with himself, changeable, hypochondriac, worried about his health, thin dliness perception of the world.

According to the level of indicators of the L-Suspect Factor, it is characteristic of the following characteristics:

Low scores: gullible, frank, sense of own insignificance, agrees with conditions, inner relaxed, complains of change, unsuspected, free from addiction, easily forgets difficulties, understands, forgives, tolerant, accommodating, benevolent towards others, carelessly refers to remarks, complaisant, easily gets along with people, works well in a team.

High marks: suspicion, jealousy, "protection" and inner tension, envious, great conceit, dogmatic, suspicious, delays his attention to failures, tyrant, demands from others to be responsible for mistakes, irritable, his interests are turned to himself, cautious about their actions, is self-centered.

N - Diplomatic relations describes the following characteristics according to the level of indicators of the factor:

*Low scores:* naivete, simple-mindedness, direct, frank, natural, direct, tactless in circulation, has an unclear mind, sociable, unrestrained emotionally, simple tastes, lack of insight, inexperienced in the analysis of motivations, content with what is available, blindly believes in human essence.

*High marks:* insight, cunning, experienced, sophisticated, calculating, reasonable, refined, able to behave in society, has an accurate mind, emotionally withstood, artificial, aesthetically sophisticated, perceptive towards others, ambitious, unreliable, cautious, "cuts off angles".

O - characterized by the following characteristics of anxiety factor level:

*Low ratings:* carelessness, self-confidence, arrogance, calmness, serenity, complacency, composure, cheerful, cheerful, unrepentant, serene, calm, insensitive to the approval or censure of others, careless, energetic, unmoved, thoughtless.

*High marks:* guilt, full of anxiety and foreboding, self-flagellation, self-doubt, vulnerable, anxious, depressed, depressed, easy to cry, lightly hurt, lonely, dominated by moods, impressionable, strong sense of duty, sensitive to reactions of others, scrupulous, bustling, hypochondriac, symptoms of fear, immersed in gloomy meditations.

Q<sub>1</sub> - characteristic of the characteristic of the novelty of the sensitivity factor:

*Low marks:* respectable, has established views and ideas, takes only the time tested, is suspicious of new people, doubts new ideas, tolerates traditional difficulties, is prone to moralization and moralizing.

*High marks:* an assessor, an analyst, a liberal, a free-thinker, tolerance for inconveniences, critical, good information, does not trust authorities, does not take anything for granted, is characterized by the presence of intellectual interests.

Q<sub>2</sub> - characterized by the following characteristics, depending on the degree of independence of the factor of independence:

*Low scores:* sociability, lack of independence, consistency, needs group support, makes decisions together with others, follows public opinion, focuses on social approval without initiative.

*High marks:* independence from the group, independence, resourcefulness, independently makes decisions, can dominate, does not need the support of other people, is independent.

Q<sub>3</sub> - is characteristic of the individual according to the level of indicators of the self-regulatory factor:

*Low scores:* poorly controlled, careless, inaccurate, follows their motivations, does not consider with public rules, is inattentive and indelicate, undisciplined, internal conflicts of self-image.

*High marks:* self-control, self-control, accurate, strong-willed, can subordinate himself, act according to a conscious plan, an effective leader, accept social norms, control his emotions and behavior, bring things to an end,

Q<sub>4</sub> - Stress. is characteristic of the following characteristics according to the level of indicators of the factor:

*Low ratings:* relaxed, calm, sluggish, apathetic, restrained, nefrustriruyuschy, low motivation, laziness, excessive satisfaction, equanimity.

*High marks:* collected, energetic, excited, irritable, increased motivation, despite fatigue is active, a weak sense of order, irritable.

It can be seen in the above explanations that factors of the shortened version of the questionnaire and its expressive diagnostic character allowed its adaptation in the Uzbek environment.

## METODOLOGY

The questionnaire adaptation was based on the following requirements [2, p.124]:

- Preparing the original version of the translation from the original version of the test.
- An expert evaluation of the test content by engaging the linguist and the expert who understands the original version of the test.

- To check the validity of the test on the scale of the experimental experience.
- Installation of new scales and collection of appropriate local selection criteria.

## RESULTS

The survey was performed in two stages. At the first stage, the final version of the assignment assignments in Uzbek was prepared on request. In the second phase, 13 PFs were used to verify the reliability and validity of the survey. At this stage, the benchmark benchmarks for survey adjustment were calculated. As a result, students of the National University of Uzbekistan (217, 141 girls and 76 young men) were involved. In the preparation of the variant of the Uzbek language, it was tried to preserve the content of the methodology in English and Russian.

**Table 1. Determining the reliability level of the 13 PF survey**

№	Factors		Retest results (r)
1.	B	Intelligence	0,671**
2.	C	Emotional stability	0,793**
3.	E	Dominance	0,596**
4.	H	Access to social relationships	0,692**
5.	G	Respect for Ethical Standards	0,763**
6.	I	Psychological sensitivity	0,772**
7.	L	Craving	0,596**
8.	N	Diplomatic Approach	0,589**
9.	O	Do not worry	0,770**
10.	Q <sub>1</sub>	Sensitivity to news	0,787**
11.	Q <sub>2</sub>	Independence	0,793**
12.	Q <sub>3</sub>	Self – regulation	0,693**
13.	Q <sub>4</sub>	Stress	0,595**

Explanation:\*\* $p \leq 0,01$

In the process of adaptation, the backbones were based on three aspects of the definition of reliability: the rule of retest, the use of parallel forms and internal compliance. The results of the test review are as follows: The correlation coefficients between the retest intervals for the fifteen-day period are as follows: Intelligence (V) 0.671; emotional stability (S) 0,793; dominantness (D) 0,596.

All indications were based on psychometric requirements. Excluding some of the obtained results, the results obtained high coefficients. The results are summarized below (Table 2).

Thus, the reliability indicators show that the reliability of factors is satisfactory. It is not surprising to find faults for each factor in the study. For the validation of the survey, it was based on the criteria for ensuring empirical validity.

**Table 2. Results of internal compliance checking of 13 PFs factor**

№	The degree of internal consistency of survey factors for the Kronbach coefficient		
	Factors		Uzbek version
1.	B	Intelligence	0,714**
2.	C	Emotional stability	0,531*
3.	E	Dominance	0,501*
4.	H	Access to social relationships	0,678**
5.	G	Respect for Ethical Standards	0,645*
6.	I	Psychological sensitivity	0,647*
7.	L	Craving	0,700**
8.	N	Diplomatic Approach	0,517*
9.	O	Do not worry	0,668**
10.	Q <sub>1</sub>	Sensitivity to news	0,642**
11.	Q <sub>2</sub>	Independence	0,722**
12.	Q <sub>3</sub>	Self – regulation	0,579*
13.	Q <sub>4</sub>	Stress	0,447*

Explanation: \* $p \leq 0,01$ ; \*\* $p \leq 0,01$

For this purpose, the correlation between V.M.Melnikov, L.T.Yampoliskiy "Psiodiagnostic test" scales was determined by the 13 PF. Results of validation scale scales are given in Table 3

Table 3. Correlations of factors 13 PF and Psychodiagnostic test

№	13 PF Factors	PDT patterns													
		Neuroscience	psychotism	Depression	Commitment	Generality activity	Disinhibition	Submissiveness	Communication	Aesthetic impression	Optimism	Psychic instability	Acostity	Intiroverciya	Sensitivity
B	Intelligence	0,31	-0,13	0,22	0,56*	-0,27	0,36*	0,08	0,40*	0,34*	0,34	-0,54**	0,38	0,24	0,27
C	Emotional stability	-0,47**	-0,43*	-0,35*	0,28	-0,25	0,31	0,17	0,34*	0,42*	0,27	-0,57**	0,04	0,25	0,21
E	Dominance	0,27	0,27	0,30	0,27	0,13	0,43*	-0,47**	0,37*	0,44**	0,25	-0,56**	0,14	0,24	0,10
H	Access to social relationships	-0,41*	-0,38*	0,27	0,32	0,04	0,51*	0,15	0,58**	0,40*	0,43*	-0,34	0,08	-0,45*	0,33
G	Respect for Ethical Standards	0,11	0,24	-0,12	0,43*	-0,22	0,33*	0,27	0,36*	0,27	0,24	-0,31	-0,38*	0,40*	0,27
I	Psychological sensitivity	0,25	0,18	0,14	0,27	0,12	0,27	0,30	0,35*	0,37*	0,43*	0,18	0,10	0,19	0,45*
L	Craving	0,41*	0,44*	0,38*	-0,31	0,41*	0,14	0,07	0,30	0,17	0,25	0,32	0,27	0,12	0,20
N	Diplomatic Approach	0,20	0,17	-0,21	0,34*	0,16	0,39*	0,12	0,35*	0,38*	0,32*	0,14	0,17	0,13	0,06
O	Do not worry	0,43*	0,40*	0,45*	0,24	0,27	0,10	0,25	-0,31*	0,08	0,19	0,37*	0,18	0,28	0,31*
Q <sub>1</sub>	Sensitivity to news	0,14	0,11	0,13	0,18	-0,30*	0,35*	0,08	0,47*	0,35*	0,42*	-0,36*	0,05	0,27	0,37*
Q <sub>2</sub>	Intelligence	-0,40*	-0,38*	0,33*	0,31*	0,07	0,34*	-0,48**	0,32*	0,30	0,23	-0,27	0,09	0,11	0,19
Q <sub>3</sub>	Emotional stability	-0,31*	-0,40*	0,32*	0,34*	0,04	0,35*	0,02	0,37*	0,25	0,23	0,13	0,29	0,28	0,14
Q <sub>4</sub>	Dominance	0,52**	0,45**	0,38*	-0,24	0,28	-0,32*	0,21	0,08	0,12	-0,10	-0,43*	0,16	0,24	0,34*

Explanation: \*p&lt;0,05; \*\*p&lt;0,01



below. The results show that correlation relationships between 13 PF and Psychodiagnostic test scales were observed at the end of the efforts to ensure constructive validation of test standards. According to him, the "intellectual" scale was characterized by "honesty" ( $r = 0,56$ ;  $r \leq 0,01$ ), "general chaos" ( $r = 0,36$ ;  $r \leq 0,05$ ), "communication" ( $r = 0,40$ ;  $r \leq 0,05$ ), "aesthetic impression" ( $r = 0,34$ ;  $r \leq 0,01$ ) with positive and "psychic instability" ( $r = -0,54$ ;  $r \leq 0,01$ ) scales negative correlation relations. The "emotional stability" factor of the survey was "neurotism" ( $r = -0,47$ ;  $r \leq 0,01$ ), "psychotism" ( $r = -0,43$ ;  $r \leq 0,05$ ), "depression" ( $r = 0,33$ ;  $r \leq 0,05$ ), negative correlation with "psychic instability" scales.

The situation in question depends on the extent to which the survey data related to these scales can be used to measure the characteristics that should be identified. The "E" factor was "general activity" ( $r = 0,43$ ;  $r \leq 0,01$ ), "communication" ( $r = 0,37$ ;  $r \leq 0,05$ ), "aesthetic impression" ( $r = 0,44$ ;  $r \leq 0,01$ ) and positive correlation with "affiliation" ( $r = -0,47$ ;  $r \leq 0,01$ ) and "psychic instability" ( $r = 0,56$ ;  $r \leq 0,01$ ) scales it was.

The factor "N" is "neurotism" ( $r = -0,41$ ;  $r \leq 0,05$ ), "psychotism" ( $r = -0,38$ ;  $r \leq 0,05$ ), introversion ( $r = -0,45$ ;  $r \leq 0,01$ ) scales; "General activity" ( $r = 0,51$ ;  $r \leq 0,01$ ), "communication" ( $r = 0,58$ ;  $r \leq 0,01$ ), "aesthetic impression" ( $r = 0,40$ ;  $r \leq 0,05$ ) have positive correlation.

The factor "G" was "honesty" ( $r = 0,43$ ;  $r \leq 0,05$ ), "general activity" ( $r = 0,33$ ;  $r < 0,05$ ), introversion ( $r = 0,40$ ;  $p \leq 0,05$ ). Negative correlation scales with the "association of" scale. Factor I is "communication" ( $r = 0,35$ ;  $r \leq 0,05$ ), "aesthetic impression" ( $r = 0,37$ ;  $r \leq 0,05$ ), "censorship" ( $r = 0,45$ ;  $r \leq 0,01$ ) have positive correlation. In the "L" factor, "neurotism" ( $r = 0,41$ ;  $r \leq 0,05$ ), "psychotism" ( $r = 0,44$ ;  $r \leq 0,05$ ), "depression" ( $r = 0,38$ ;  $r \leq 0,05$ ), and positive correlation with scale "stabilization" ( $r = 0,41$ ;  $r \leq 0,05$ ).

The factor "N" is "honesty" ( $r = 0,34$ ;  $r \leq 0,05$ ), "general activity" ( $r = 0,39$ ;  $r \leq 0,05$ ), "communication" ( $r = 0,35$ ;  $r \leq 0,05$ ), "aesthetic impression" ( $r = 0,38$ ;  $r \leq 0,05$ ), "affection" ( $r = 0,32$ ;  $r \leq 0,05$ ) with positive correlation. The "O" factor is associated with "neurotism" ( $r = 0,43$ ;  $r \leq 0,05$ ), "psychotism" ( $r = 0,40$ ;  $r \leq 0,05$ ), depression ( $r = 0,45$ ;  $r \leq 0,01$ ), positive correlation with "psychic instability" ( $r = 0,37$ ;  $r \leq 0,05$ ) indicates compliance with the questionnaire. Corresponding positive and negative correlation in the questionnaires "Q1", "Q2", "Q3", and "Q4" corresponds to the rules of ensuring the correctness of the poll.

The positive results obtained during the survey's adaptation process do not conclude that the work done is complete and complete. It is important to use the survey primarily for pilot research, and second, to use psychodiagnostic problems. The results obtained during the adaptation process will need to be emphasized when using the research results for future research purposes. Accordingly, the personalized questionnaire can be used for personalized problem research, for the purpose of psychological counseling, for organizing training activities. However, it should not be forgotten that the most important defect that can be encountered during the inquiry process is that it can not be falsified.

## CONCLUSIONS

1. R.Cattell's extensive psychological research has been carried out on the basis of personalized inquiries, but adaptation of these queries to the Uzbek cultural environment is an important research topic.



2. Determine the need to adapt the questionnaire of R.Cattell's questionnaire to the convenience of the questionnaire and the characteristic features of the person.
3. The adaptation of the PF survey to the local environment was carried out in accordance with the psychometric criteria and requirements.
4. The reliability level of the customized version of the questionnaire is provided in accordance with the rule of test. According to the retest, the factors of the survey have a high reliability coefficient. The initial stage of the survey was positive.
5. Correlation of "Psychodiagnostic Test" scales was found to ensure constructive validity of the research factors. As a result, the initial version of the questionnaire was used experimentally in the Uzbek environment for research purposes.
6. One of the surveys is a personalized survey of 13 PF quizzes that is important for the Uzbek environment.
7. The adapted version of the questionnaire was adapted for use by psychologists as a research methodology in teaching materials, psychological counseling consultation tools, and psychiatric diagnostics.
8. Reliability of 13 PF surveys is based on rest. As a result, the factors of the survey were highly correlated with correlation coefficients.
9. Psychodiagnostic test was used to validate the study factors. There is a correlation relation between the scale of the two scores.

## REFERENCES

1. Batarshv A.V.(2001) Temperament and character. Psychological diagnostics.-M.: Vldos-PRESS, 336.
2. Burlachuk L.F. (2006) Psychodiagnosics: Textbook for high schools. - St. Petersburg:Peter.351
3. Zhabborov A.M. Teacher's ethnic background in Uzbek school: Psychologist. fanlari doctor diss.: -T.: NUUZ.1999.-317 p.
4. Saparov Sh.B. (1999) Personality and professional characteristics of teachers of special disciplines of secondary specialized vocational schools: Dis. Candidate of Sciences.- Tashkent.: TGPI, 136
5. Skobchik L.(2003). The standardized multifactorial method of investigating the personality.-Spb.:Speech, 219.
6. Shmelev A.G. (2002)/ Psychodiagnosics of personality traits.-SPb .: Rech, 480 p.