

## **Standardization of the Existence Scale to the Russian Sample**

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### **Abstract**

The Existence Scale (ES) is a questionnaire designed to estimate of the existential fulfillment of the person. The test is based on Frankl's concept of existential meaning and Längle's expanded definition of it. It includes 4 subscales: Self-distance, Self-transcendence, Freedom and Responsibility. After standardization for Russian language speakers the item number of 46 was reduced to 43 items. More than 1000 respondents participated in the test validation procedure. To cross-test the validity, the Personal Orientation Inventory test (POI), the Sixteen Personality Factor Questionnaire (16 PF) and the Eysenck Personality Inventory test (EPI) were used.

**Key words:** existential fulfillment of the person, self-distance, self-transcendence, internal freedom, responsibility, self-actualization, neuroticism.

### **1. Introduction**

This research is devoted to the standardization of the Existence Scale (ES) (Längle, Orgler, 1989) to a Russian Sample. The technique was developed on the basis of the existential-analytical theory of the person. The central construct of the ES is the existential fulfillment of the person.

It is possible to speak about a developing interest in psychology for ideas and methods for existential analysis in Russia now. However, during their application there are frequent methodical problems. As a whole, the problem of creating methodical tools for the study of semantic systems through their reflection in individual outlook undoubtedly is very important for modern domestic psychology of the person. An example of such a tool is the Existence Scale questionnaire translated into Russian in 2002.

There is a shortage of methodical tools for an estimation of researches spent within the framework of existential psychology in Russia for today. In this connection, there is a necessity of creating a valid and reliable diagnostic tool developed within the framework of this paradigm and applied to a Russian sample.

### **2. Object**

The Existence Scale questionnaire is based on Frankl's anthropological theory (Frankl, 1990) and on a four-level process model of a person's search for meaning in life (Längle, 2005). ES is based on an exploration of the personal and existential realities of human beings. The test includes four basic elements of existence: realistic perception, free emotionality, decision-making ability and responsibility in action. The test is assessing the competence of an individual to cope in a meaningful way with oneself and one's world.

The ES was translated into Russian in 2002 by O. Larchenko. It was edited by a team from the International Society of Logotherapy and Existential Analysis, Moscow: G. Petrova, N. Ignatieva, A. Loktionova, N. Dyatko, S. Krivtsova, I. Larina. The preliminary approbation of the Russian version was made within the framework of the graduate research work by I. Maynina

under the scientific supervision of S. Krivtsova of the MSU (Moscow State University) department of Psychology in 2007.

### **3. Methods**

#### 3.1. Research Participants

The ES was tested on 1001 (636 women and 365 men) Russian adults from the age of 17 to 71. People came from various occupations and had various educational levels. The distribution was homogeneous. The average age of the respondents was 34.9. The standard deviation age was 11.9. The comparison group consisted of the respondents with the expressed degree of depression.

#### 3.2. Procedure

The Existence Scale questionnaire is self-report measure which does not require any equipment. The participation of the respondents in the research was voluntary. At the end of the research the feedback was given to the respondents.

#### 3.3. Techniques

External validity was tested by: the Personal Orientation Inventory test (POI), the Sixteen Personality Factor Questionnaire, 16 PF (Form A), the Eysenck Personality Inventory test (EPI).

To check the construct validity we used the comparison of the ES results with results of the EPI and of the Beck Depression Inventory.

#### 3.4. Methods of processing and analysis of the data

For data processing we used the statistical packages STATISTICA 6.0. and SPSSv12.0 for Windows.

### **4. Results and discussion**

#### 4.1. Check for internal validity

First of all we put the question of research regarding internal validity of the test and about conformity of its scales to the basic rules of Frankl's concept respecting Längle's enlarged definition of existential meaning as prerequisite of existential fulfillment.

The ES passed the check on internal validity successfully, with positive results. Items and subscales correspond to the basic rules Längle's personal existential analysis. This result was based on the Russian interpretation of the ES items.

#### 4.2. Check for reliability

We measured two versions of reliability: a) Reliability - stability (retest reliability) and b) Reliability - coordination (single-stage reliability). Retest reliability of scales of the ES was checked by the correlation (Spearman Correlation Coefficient) of the data of two performances made with a month interval. Cronbach Alpha Coefficient was served by the criterion of single-stage reliability of the test.

High retest reliability was received as a result of research (Table 1). Thus the conclusion about the temporal stability of the existential fulfillment of a person can be made.

	Spearman Correlation Coefficients
Self-distance (SD)	0.684
Self-transcendence (ST)	0.685
Freedom (F)	0.661
Responsibility (R)	0.760
Person (P)	0.711
Existentiality (E)	0.756
Total score (G)	0.756

**Table 1: Spearman Correlation Coefficients for the subscales and for the total score in the sample from the general population ( $p < .01$ ). N = 111**

The results given in table 2 demonstrate lower results in the Russian sample in comparison with the Austrian sample of single-stage reliability. It is possible to make the assumption, that the distinctions in meanings of reliability received on Russian and Austrian samples are possibly due to cultural differences.

	<b>Russian sample</b>	<b>Austrian sample<sup>1</sup></b>
	Cronbach Alpha Coefficients (N = 1001)	Cronbach Alpha Coefficients (N = 1028)
Self-distance (SD)	0.637	0.70
Self-transcendence (ST)	0.806	0.84
Freedom (F)	0.685	0.82
Responsibility (R)	0.725	0.83
Person (P)	0.832	0.87
Existentiality (E)	0.826	0.90
Total score (G)	0.896	0.93

**Table 2: Cronbach Alpha Coefficients for the subscales and for the total score in the Russian and Austrian sample from the general population (p <.01)**

#### 4.3. Estimation of internal consistency

In the initial variant the questionnaire consisted of 46 questions. After the check of each single item with total numbers both of subscales and of integrated parameters (P, E and G) we found out that the items are more coordinated with the subscales than with the total parameters. The items of questionnaire number 15 (return item), 20 and 22 have shown small correlation with a total number on the scale (Rs from 0.291 up to 0.342) and consequently were excluded from the general list of questions (see the Application 1).

The analysis has shown high enough consistency of scales of the final version of the questionnaire including 43 questions.

At the later procedure of the analysis and data processing we used the final version of the questionnaire.

#### 4.4. Check of the coordination of scales of the questionnaire

The criterion for the estimation of the coordination of scales was the Spearman Correlation Coefficients (see Table 3).

	SD	ST	P	F	V	E	G
SD	1.000						
ST	0.533	1.000					
P	0.827	0.908	1.000				
F	0.479	0.616	0.632	1.000			
V	0.506	0.581	0.618	0.677	1.000		
E	0.540	0.653	0.683	0.909	0.916	1.000	
G	0.727	0.843	0.903	0.846	0.844	0.925	1.000

**Table 3: Correlation of scales of a questionnaire among themselves (p <.01)**

#### 4.5. Check for external validity

For the external validity check we used the Personal Orientation Inventory test (POI), the Sixteen Personality Factor Questionnaire (16 PF, Form A) and the Eysenck Personality Inventory test (EPI).

An analysis of correlations between the scales of the questionnaires was carried out with the Spearman Correlation Coefficients (Rs, r).

By using POI in the research we intended to study the connection of the ES with the test developed in the closely related humanistic approach. Thus, we analyzed the connections within the “spiritual” measurement of the mental capacities (Längle, 1999).

<sup>1</sup> Längle A., Orgler Ch., Kundi M. The Existence Scale. A new approach to assess the ability to find personal meaning in life and to reach existential fulfillment. European Psychotherapy, Vol. 4, №1. 2003, p. 140 (Table 1).

The ES and POI were tested in a sample of 93 (68 women and 25 men) Russian adults aged 18 to 69 years. The results of the analysis are submitted in table 4 to which only significant correlations are shown.

Positive correlations were observed between the scales of ES and POI tests in 19 correlation coefficients (Rs from 0.273 to 0.435 at  $p < .01$ ) (see Table 4). The most significant positive correlations between the F and E scales of ES and Autonomy and Auto sympathy scales of POI are shown below.

	F	V	E	G
Orientation of the time		0.325	0.319	0.304
Values		0.280		
Creativity	0.273			
Autonomy	0.434	0.396	0.435	0.331
Self-understanding	0.367		0.307	
Auto sympathy	0.419	0.381	0.430	0.345
Total score	0.406	0.379	0.412	0.342

**Table 4: Significant Spearman correlations between scales ES and POI ( $p < .01$ )**

In the opinion of most humanistic psychologists, autonomy is the main criterion of the mental health of the person, both in its integrity and completeness. In turn, auto sympathy is a natural basis of the mental health and integrity of a person. Auto sympathy does not mean complacency or a non-critical self-perception. It's the well realized positive Self-conception serving as a source of a steady adequate self-estimation. Self-actualization of the person is autonomy, independent and free, and is opposite to alienation and loneliness (Kalinina, 1998). Proceeding from this, these concepts should be connected to internal freedom of the person, which is a component of parameter E under our assumptions. We have found the result in our empirical research. Namely, the most positive significant correlations are observed between: a) scale F and scales Autonomy and Auto sympathy ( $r = .434$ ,  $r = .419$  accordingly), b) scale E and scales Autonomy and Auto sympathy ( $r = .435$ ,  $r = .430$  accordingly).

A positive significant correlation was also found between the total scores of ES and POI tests ( $r = .342$ ). Thus, our empirical research shows a connection between the basic rules of the existential-analytical theory of the person and of the humanistic psychology.

The ES and EPI were tested in a sample of 82 (40 women and 42 men) Russian adults aged 21 to 65 years. The results of the analysis are submitted in table 5 to which only significant correlations are shown.

	SD	ST	P	F	V	E	G
Neuroticism	-0.511	-0.344	-0.475	-0.454	-0.463	-0.496	-0.511

**Table 5: Significant Spearman correlations between scales ES and EPI ( $p < .05$ )**

We supposed that we would find correlation between different psychic axes. For this reason we used the EPI and 16 PF questionnaires. In Eysenck's opinion, temperament traits (extraversion, neuroticism) have a strong influence on behavior. Therefore it was important to provide evidence that there is no connection between extraversion and the existential features of a personality. In theory no connection should be present. Empirical research has provided evidence to support this supposition in our sample.

A significant negative connection was found between all scales of the ES and the Neuroticism scale of the EPI at  $p < .05$  (Rs from -0.344 to -0.511). It is possible to explain it by the following: the parameter Neuroticism characterizes the man on the part of his emotional stability. The parameter is bipolar. It forms a scale, on which one end there are sensitive people, emotional, disturbing, inclined painfully to experience failures and to be upset about trivialities (pole neuroticism), and on the other end - people not inclined to trouble, steady in relation to external influences causing trust, inclined to leadership (pole of stability) (Practical psychodiagnostics, 2006). Therefore it is possible to say, the more existential fulfillment the more

emotional stability and vice versa. Under our assumptions the neurotic person, proceeding from the basic rules of the existential analysis and logotherapy, has insufficient internal freedom and responsibility. “People find freedom of action through expansion of self-consciousness and subsequent acceptance of themselves and responsibility for the acts. However for freedom and responsibility one pays with constant feelings of nervousness. As soon as one realizes an alarm as inevitable, one becomes the owner of his destiny, one carries the burden of freedom and the pain of responsibility” (Frager, Fadiman, 2002, p. 844).

There was no significant connection with extraversion (Rs from -0.084 to 0.051).

The ES and 16 PF were tested in a sample of 92 (65 women and 27 men) Russian adults aged 20 to 81 years. The average age of the respondents was 36.5. The results of the analysis are in table 6 with only the significant correlations.

Significant correlations were observed between the scales of ES and 16 PF in 58 correlation coefficients (Rs from -0.434 to 0.493 at  $p < .01$ ) (see Table 6). The correlations between all scales of the ES and B, C, G, Q3 and Q4 scales of the 16 PF were interesting to us in this research.

	SD	ST	P	F	V	E	G
A	0.390	0.376	0.432	0.279		0.271	0.348
B	0.322		0.309	0.324	0.294	0.326	0.343
C	0.318	0.398	0.387	0.388	0.472	0.464	0.469
G		0.304	0.321	0.337	0.278	0.316	0.341
H		0.493	0.427	0.446	0.380	0.438	0.453
O				-0.291	-0.342	-0.344	-0.304
Q1		0.328	0.316	0.344	0.349	0.373	0.356
Q2	-0.236	-0.331	-0.319				
Q3	0.325	0.282	0.345	0.359	0.337	0.370	0.371
Q4	-0.334	-0.351	-0.371	-0.366	-0.410	-0.419	-0.434

**Table 6: Significant Spearman correlations between scales ES and 16 PF ( $p < .01$ )**

The B factor, in James McKeen Cattell’s opinion, characterizes crystallized intelligence and answers for application before any outer knowledge is received (Practical work on psycho diagnostics, 1999). Our research has shown that this factor has an average positive correlation with all scales of the ES questionnaire except for the ST scale. The lack of significance of the ST scale can be explained by the concept of self-transcendence which is defined by emotional and valuable orientations of the person and is to a lesser degree connected to his intellectual abilities.

As for other measurements, all of them to a high degree are connected with the ability reflecting the behavior and, hence, assumes presence of enough high intellectual abilities. We will carry out a more detailed research of the correspondence of the ES with various types of intelligence (such as emotional, social and psychometric intelligence) in a further study.

Besides of what we supposed to find out from the correlation of the ES with the so-called supervising triumvirate (C, G and Q3 factors). We also assumed all three factors of the 16 PF would have positive significant correlations with the ES (see Table 6). The existential person can not be free in the behavior, making decisions and being responsible for themselves, if not having the strong will and ability to correspond to the requirements of the society and the skill to supervise one’s emotions (Länge, 2005).

With low scores in factor Q4 people are imperturbable, are quiet and satisfied with any rule of businesses. High scores show intensity, excitation and active dissatisfaction of aspirations (Practical work on psycho diagnostics, 1999). The hypothesis that all scales of the ES are significantly negatively connected with the factor Q4 was proved in our research (see Table 6).

Significant correlations were not observed between all scales of the ES and E, F, I, L, M and N factors of the 16 PF.

As a result we can summarize that the ES has shown adequate external validity.

#### 4.6. Preliminary check of construct validity

The theoretical assumption of absence of correlations between the scale “Extraversion – Introversion” of the EPI and all scales of ES was checked (see Table 5). The check was made to establish the distinction between the phenomenon studied and the properties of person measured by the EPI.

The outgroup was composed of a population with average and high scores in Beck’s Depression Inventory. These parameters were compared with norms under the ES (these participants were not included into the general sample). The outgroup consisted of 34 men, whose average age was 26 years.

A significant difference was observed between the depressive and normal respondents on all variables of the ES (see Table 7).

	Mean for depressive respondents	Std. Dev.	Mean for normal respondents	t-value	df	p
SD	29.853	7.072	33.341	-2.876	33	0.0070
ST	61.088	12.396	70.176	-4.275	33	0.0002
P	90.941	17.522	103.517	-4.185	33	0.0002
F	35.529	7.944	40.824	-3.886	33	0.0005
V	39.618	8.272	46.104	-4.572	33	0.0001
E	75.147	14.600	86.928	-4.705	33	0.0000
G	166.088	29.684	190.445	-4.785	33	0.0000

**Table 7: Difference between the depressive and normal respondents for the ES. N = 34.**

The perception of stimulus in the state of depression changed according to Beck (Beck et al., 2003). Depressive states produce distortion of facts or perception of only those which are in harmony with the dysfunctional circuit dominant in depressive moods. As a rule, an individual is capable of more or less objective estimation of negative ideas in the light forms of depression. Negative ideas gain increasing force with aggravation of depression, despite any objective evidence of their correctness. The depressed individual is less inclined to recognize an inaccuracy of his own interpretations of reality.

The distortion of the perceived information and its interpretations, reassessment and underestimation of events, the absolutism and dichotomy of thinking and so on, is characteristic of a depressed individual (Beck et al., 2003). The person structures his or her experience in primitive ways and his judgments about unpleasant events carry global character in depression. It doesn’t correspond in any way with the concept of the existential person who is taking place in continuous dialogue with the environmental world and internal freedom in his or her actions.

It is possible to say that the questionnaire “Existence Scale” has sustained a preliminary check of construct validity, proceeding from the received results of research.

#### 4.7. Correlation with the age

A weak positive correlation can be observed between the subscale V and the age of the respondents ( $r = .134$  at  $p < .01$ ).

The results give us the following assumption: the level of responsibility rises with age to a small degree. Man undergoes a set of changes in himself and in life as a whole, when he begins to grow up. The reassessment itself and lived portion of life occurs at certain stages of life. When he becomes more senior, then he should bear greater responsibility both for himself and for other people (a statistically significant positive but weak correlation is observed). As a whole, further analysis of the data has shown that the influence of age within this sample can be neglected.

#### 4.8. Correlation with the gender

The constructors of the ES found no difference between men and women (Längle, 2001). This could not be found in our research. The results show significant distinctions between men

and women on the ST scale selected by a semi boldface font in the table 8 (mistake of the first sort = 0.00003).

	Rank Sum Group 1*	Rank Sum Group 2**	U	Z	p-level	Valid N Group 1*	Valid N Group 2**
SD	323405,0	178096,0	111301,0	1,083	0,2787	636	365
ST	336993,5	164507,5	97712,5	<b>4,170</b>	<b>0,00003</b>	636	365
P	332670,5	168830,5	102035,5	3,188	0,0143	636	365
F	319333,5	182167,5	115372,5	0,1586	0,8741	636	365
V	319448,0	182053,0	115258,0	0,184	0,8537	636	365
E	319508,0	181993,0	115198,0	0,198	0,8430	636	365
G	326195,0	175306,0	108511,0	1,717	0,0860	636	365

Where the \*Group 1 is the women, the \*\*Group 2 is the men.

**Table 8: Distinctions of ES scores between men and women (Mann-Whitney U test) (p <.01)**

These distinctions between men and women on the ST scale of the ES is most likely explained by the fact that women, to a greater degree, are capable of comprehending and feeling and also able to express their feelings to other people (Längle, 2005).

Due to the fact that we did not find any obvious correlation between the results of the survey and the age and gender of the respondents, we think it is possible to translate the table of raw data into the standard scale for all scales in the ES for the sample (see Table 9).

The percentile normalization was used while translating the rough numbers into standard format because the hypothesis about normal distribution has not proved to be true for all scales of a questionnaire ES.

	SD	ST	P	F	V	E	G
I	8-19	14-45	22-70	10-23	11-27	21-54	43-130
II	20-23	46-53	71-80	24-29	28-32	55-63	131-146
III	24-26	54-60	81-90	30-33	33-38	64-72	147-164
IV	27-30	61-66	91-98	31-37	39-42	73-79	165-179
V	31-33	67-71	99-105	38-41	43-47	80-88	180-193
VI	34-36	72-75	106-111	42-45	48-51	89-95	194-206
VII	37-38	76-78	112-116	46-49	52-54	96-101	207-217
VIII	39-41	79-81	117-120	50-52	55-58	102-108	218-227
IX	42-44	82-83	121-125	53-55	59-62	109-114	228-235
X	45 and more	84	126 and more	56 and more	63 and more	115 and more	236 and more

**Table 9: Table of transformation of row scores of the ES. N = 1001.**

Thus, results of standardization of ES show that the Russian version of the test meets the requirements of reliability, internal validity, external validity, construct validity and is suitable for use for Russian samples in conjunction with a questionnaire based upon measurement of other properties of the person because the ES is not protected from social desirability.

## 5. Conclusions

1. The ES has passed the check on internal validity successfully. Items and subscales correspond to the basic rules of Längle's existential analysis according to the received results.
2. High retest reliability was seen as a result of the research. Thus, the conclusion regarding the temporal stability of the existential fulfillment of a person can be made.
3. The items in a questionnaire are more coordinated with subscales, than with integrated parameters. The analysis has shown high enough consistency of scales of the final version of a questionnaire. The general coordination of a questionnaire as one-dimensional tool and coordination of scales among themselves was determined.

4. The questionnaire has sustained a check on external validity and preliminary construct validity.
5. Comparison of results in outgroup and test norms confirms our assumption of essential distinction between scores of depressive and normal participants.
6. It was not revealed in the results whether there is a correlation between age and gender of the respondents, except for a scale “Self-transcendence” (ST) of the ES.
7. The test norms were constructed by results of research.
8. Results of standardization of the ES show that the Russian version of the test meets the requirements of reliability, internal validity, external validity, construct validity and is suitable for use on Russian sample in conjunction with a questionnaire directed at measurement of other properties of the person, because the ES is not protected from social desirability.

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## Application 1

### Correlations of each question with the total number on the ES questionnaire (p < .01)

Number of the item in the	Number of the item in the	SD	ST	F	V	P	E	G



initial version of the questionnaire	final version of the questionnaire							
1	1				0.451		0.429	0.424
2	2		0.406			0.298		0.216
3	3	0.533				0.370		0.262
4	4		0.483			0.456		0.404
5	5	0.567				0.447		0.359
6	6				0.569		0.547	0.516
7	7				0.408		0.368	0.318
8	8				0.359		0.348	0.320
9	9			0.492			0.477	0.443
10	10			0.453			0.432	0.397
11	11		0.555			0.499		0.427
12	12		0.577			0.537		0.521
13	13		0.637			0.591		0.582
14	14		0.528			0.508		0.533
15				0.313			0.220	0.220
16	15				0.498		0.506	0.480
17	16			0.595			0.580	0.558
18	17			0.480			0.446	0.400
19	18	0.469				0.533		0.594
20					0.291		0.299	0.162
21	19		0.439			0.354		0.284
22					0.317		0.241	0.195
23	20			0.342			0.251	0.211
24	21			0.567			0.494	0.452
25	22				0.460		0.482	0.505
26	23			0.486			0.397	0.399
27	24		0.541			0.532		0.529
28	25			0.471			0.432	0.418
29	26				0.466		0.466	0.414
30	27				0.531		0.463	0.432
31	28			0.430			0.458	0.487
32	29	0.557				0.392		0.252
33	30		0.460			0.462		0.388
34	31		0.530			0.497		0.444
35	32		0.609			0.559		0.593
36	33		0.418			0.335		0.302
37	34				0.455		0.376	0.300
38	35				0.615		0.604	0.581
39	36				0.521		0.452	0.429
40	37	0.686				0.502		0.389
41	38		0.463			0.426		0.342
42	39	0.540				0.596		0.577
43	40	0.462				0.549		0.482
44	41	0.252				0.177		0.184
45	42		0.601			0.581		0.509
46	43			0.571			0.545	0.577