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## Can we assess whether Ukrainians flourish? The Ukrainian translation of the flourishing scale <sup>☆</sup>

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### ABSTRACT

The aim of this study was to translate the Flourishing Scale, which is a brief 8-item measure, into Ukrainian and examine its construct validity. The Flourishing Scale has been previously validated into various languages, including Russian. While Ukrainian is a distinct language with its unique characteristics, it shares some similarities with Russian due to historical and geographical connections. These similarities encompass words with similar or related meanings, comparable sentence structures, and certain cultural references and idiomatic expressions. Accordingly, the Ukrainian version of the Flourishing Scale was developed based on the Russian version. The translation process involved two proficient researchers fluent in Ukrainian, English, and Russian. Following the committee approach, one researcher conducted the initial translation, while the other ensured the accuracy and linguistic equivalence of the translated items. The eight items were pilot-tested with Ukrainian-speaking adult participants. Results from confirmatory factor analysis indicated that the Ukrainian version of the Flourishing Scale showed evidence of construct validity and reliability, thereby resulting in a tool that can be used with Ukrainian adults to further examine their flourishing.

- The Flourishing Scale was translated into Ukrainian and pilot-tested to assess its psychometric properties.
- Results indicated good construct validity and reliability of the Ukrainian version of the Flourishing Scale.

<sup>☆</sup> Related research article: Yukhymenko-Lescroart, M. A., Sharma, G., & Voiedilova, O. (2023). Thriving amidst adversity: Flourishing and grit in Ukrainian college students with strong life purpose before and after the onset of the Russian war in Ukraine. *Heliyon*, 9(11), e21456. <https://doi.org/10.1016/j.heliyon.2023.e21456>

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## Specifications Table

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More specific subject area:	Positive Psychology, Measurement
Name of your method:	The Flourishing Scale – Ukrainian Versions
Name and reference of original method:	Diener, E., Wirtz, D., Tov, W., Kim-Prieto, C., Choi, D. W., Oishi, S., & Biswas-Diener, R. (2010). New well-being measures: Short scales to assess flourishing and positive and negative feelings. <i>Social Indicators Research</i> , 97, 143-156. <a href="https://doi.org/10.1007/s11205-009-9493-y">https://doi.org/10.1007/s11205-009-9493-y</a>
Resource availability:	Didino, D., Taran, E. A., Barysheva, G. A., & Casati, F. (2019). Psychometric evaluation of the Russian version of the flourishing scale in a sample of older adults living in Siberia. <i>Health and Quality of Life Outcomes</i> , 17(1), 34-34. <a href="https://doi.org/10.1186/s12955-019-1100-6">https://doi.org/10.1186/s12955-019-1100-6</a> The methods described here are implemented using the following software: Mplus. Full details of the code are provided. Data associated with this work are provided in Supplementary Material.

## Method details

The objective of this study was to translate the Flourishing Scale [1] into Ukrainian and assess its construct validity and reliability. The Flourishing Scale is a brief 8-item measure that evaluates individuals' perceived success across important domains such as relationships, self-esteem, purpose, and optimism, encapsulating key aspects of personal "prosperity." Given the significance of human flourishing, the Flourishing Scale has been translated into various languages. The Russian version [2] was created and underwent rigorous psychometric analysis using a representative sample of 851 older adults, demonstrating robust psychometric properties. While Ukrainian is a distinct language with its unique characteristics, it shares some similarities with Russian due to historical and geographical connections. These similarities encompass words with similar or related meanings, comparable sentence structures, and certain cultural references and idiomatic expressions. Accordingly, the Ukrainian version of the Flourishing Scale was developed based on the Russian version [2].

The translation process involved two proficient researchers fluent in Ukrainian, English, and Russian. Following the committee approach [3], one researcher conducted the initial translation, while the other ensured the accuracy and linguistic equivalence of the translated items. Their combined expertise and rigorous methodology guaranteed the fidelity and integrity of the Ukrainian version of the scale.

Table 1 presents the Ukrainian version of the Flourishing Scale, alongside its English original and the Russian version. This table serves as a valuable resource for constructing the Ukrainian version to administer to participants who speak Ukrainian.

## Method validation

After translating the scales, construct validity and reliability of the Ukrainian versions of the Flourishing Scale was examined by applying confirmatory factor analysis to two datasets that came from a larger project. Dataset-1 consisted of 159 participants, on average aged 19.4 years (65.4% were men), which was collected between November 2021 and January 2022. Dataset-2 comprised 107 participants, on average aged 19.9 years (61.7 % were men), which were collected between April and June 2022. The datasets

**Table 1**  
The flourishing scale: Ukrainian version, English - Original, Russian - Original.

Ukrainian version	English version - original [1]	Russian version [2]
Школа процвітання - українська версія	Flourishing Scale	Шкала процветания - русская версия
1. Я веду цілеспрямоване, повне сенсу життя.	1. I lead a purposeful and meaningful life.	1. Я веду целенаправленную, полную смысла жизнь.
2. Я вдячний людям за підтримку.	2. My social relationships are supportive and rewarding.	2. Я благодарен людям за поддержку.
3. Я поглинений своїми повсякденними справами і відчуваю до них інтерес.	3. I am engaged and interested in my daily activities.	3. Я поглощен своими повседневными делами и испытываю к ним интерес.
4. Я всіма силами сприяю щастю і благополуччю інших людей.	4. I actively contribute to the happiness and well-being of others.	4. Я всеми силами способствую счастью и благополучию других людей.
5. Я Компетентний у тих видах діяльності, які для мене важливі, і здатний їх виконувати.	5. I am competent and capable in the activities that are important to me.	5. Я компетентен в тех видах деятельности, которые для меня важны, и способен их выполнять.
6. Я хороша людина і у мене хороше життя.	6. I am a good person and live a good life.	6. Я хороший человек и у меня хорошая жизнь.
7. Я з оптимізмом дивлюся в майбутнє.	7. I am optimistic about my future.	7. Я с оптимизмом смотрю в будущее.
8. Люди поважають мене.	8. People respect me.	8. Люди уважают меня.
Абсолютно не згоден (1)	Strongly disagree (1)	Абсолютно не согласен (1)
Не згоден (2)	Disagree (2)	Не согласен (2)
Скоріше не згоден (3)	Slightly disagree (3)	Скорее не согласен (3)
Невизначено (і згоден і не згоден) (4)	Mixed or neither agree nor disagree (4)	Неопределенно (и согласен и не согласен) (4)
Скоріше згоден (5)	Slightly agree (5)	Скорее согласен (5)
Згоден (6)	Agree (6)	Согласен (6)
Абсолютно згоден (7)	Strongly agree (7)	Абсолютно согласен (7)

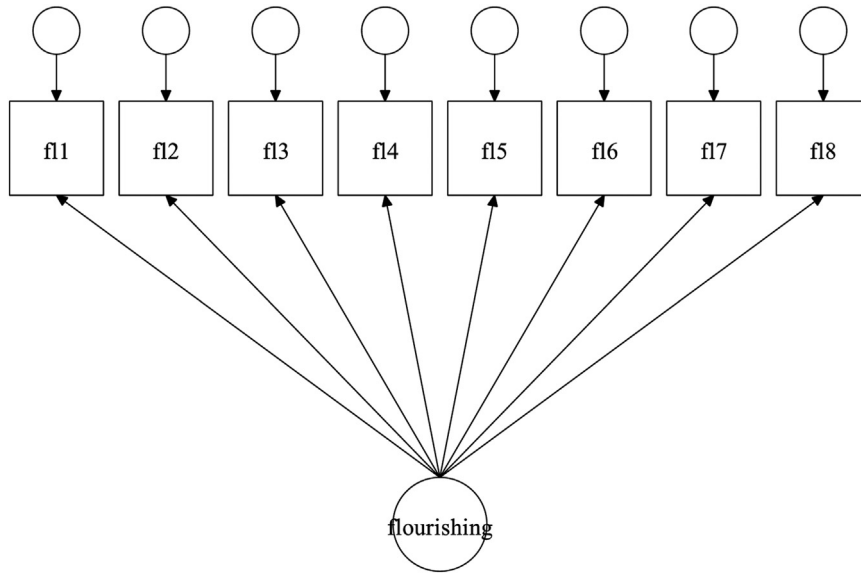


Fig. 1. Measurement Model of the Ukrainian Version of the Flourishing Scale.

```

TITLE:      Ukrainian Version of the Flourishing Scale
DATA:      FILE IS FlourishingScale.csv;

VARIABLE:
NAMES ARE
Dataset F11-F18;
MISSING ARE ALL (-999);
USEOBSERVATIONS ARE (Dataset EQ 1); !1=dataset-1 2=dataset-2
USEVARIABLES ARE
F11-F18;

ANALYSIS:
Estimator = MLR;

MODEL:
FLOURISHING BY F11-F18;

OUTPUT:
SAMPSTAT STDYX MODINDICES CINTERVAL;
    
```

Fig. 2. Mplus Syntax for Testing the Measurement Model of the Ukrainian Version of the Flourishing Scale.

were a result of administering the questionnaires online through Qualtrics. Prior to responding to the items, all participants provided informed consents. Then, we used Mplus software, version 8.9 [4] to examine factorial validity, construct validity, and reliability through confirmatory factor analysis. The measurement model was evaluated based on the comparative fit index (CFI), the Tucker-Lewis index (TLI), the root-mean-square-error of approximation (RMSEA), and the standardized-root-mean residual (SRMR), with values of CFI and TLI higher than .90 and .95, values of RMSEA and SRMR of lower than .08 and .06 indicating good and excellent fit [5].

Missing data on individual items ranged from 1.3 to 1.9% and were missing completely at random in dataset-1:  $\chi^2(14, N = 159) = 9.47, p = .800$ . No missing data were present in dataset-2. Confirmatory factor analysis with robust maximum likelihood estimation method was performed on the eight items of the Ukrainian version of the Flourishing Scale. As shown in Fig. 1, this was a single-factor measurement model with no further modifications. Mplus syntax for this model is presented in Fig. 2.

The fit of the measurement model was good model was good in dataset-1:  $\chi^2(20, N = 159) = 28.24, p = .104, RMSEA = .051, 90\% CI [.000, .091], CFI = .964, TLI = .950, SRMR = .046$ , and in dataset-2:  $\chi^2(20, N = 107) = 24.97, p = .203, RMSEA = .048, 90\% CI [.000, .101], CFI = .977, TLI = .967, SRMR = .044$ . As shown in Table 2, factor loadings ranged from .54 to .73 in dataset-1 and from .56 to .77 in dataset-2, all of which were above the .40 threshold, indicating factorial validity of the items [6].

Reliability estimates, including McDonald's  $\omega$  and Cronbach's  $\alpha$ , along with their 95% confidence intervals, are presented in Table 3. As shown in Table 3, reliability estimates in dataset-1 were .97 In dataset-2, reliability estimates were .87 and .86 for McDonald's  $\omega$  and Cronbach's  $\alpha$ , respectively. These results indicated a good level of internal consistency of the scale [6].

**Table 2**  
Factor loadings of items in the Ukrainian version of the flourishing scale.

Item	Dataset-1	Dataset-2
Flourishing-1	.70	.66
Flourishing-2	.60	.56
Flourishing-3	.73	.77
Flourishing-4	.57	.63
Flourishing-5	.68	.65
Flourishing-6	.63	.77
Flourishing-7	.62	.72
Flourishing-8	.54	.57

**Table 3**  
Scale reliability statistics.

Reliability Measure	Dataset-1		Dataset-2	
	Point estimate	95% CI	Point estimate	95% CI
McDonald's $\omega$	.97	[.96, .98]	.87	[.83, .91]
Cronbach's $\alpha$	.97	[.96, .98]	.86	[.82, .90]

Note. CI = confidence interval.

A recent study utilized the Ukrainian Translation of the Flourishing Scale [7]. In this study, the Flourishing scale was reported to have positive correlations with the following related measures:

- Grit [8,9]: Consistency of interest:  $r(157) = .15, p = .050$  (dataset-1) and  $r(105) = .13, p = .162$  (dataset-2);
- Grit [8,9]: Perseverance of effort:  $r(157) = .69, p < .001$  (dataset-1) and  $r(105) = .65, p < .001$  (dataset-2);
- Sense of purpose in life [10–12]: Awakening to purpose:  $r(157) = .59, p < .001$  (dataset-1) and  $r(105) = .54, p < .001$  (dataset-2);
- Sense of purpose in life [10–12]: Awareness of purpose:  $r(157) = .46, p < .001$  (dataset-1) and  $r(105) = .40, p < .001$  (dataset-2);
- Sense of purpose in life [10–12]: Altruistic purpose:  $r(157) = .58, p < .001$  (dataset-1) and  $r(105) = .56, p < .001$  (dataset-2);
- Orientation of purpose in life [12,13]: Others-growth purpose orientation:  $r(157) = .65, p < .001$  (dataset-1) and  $r(105) = .65, p < .001$  (dataset-2);
- Orientation of purpose in life [12,13]: Self-growth purpose orientation:  $r(157) = .69, p < .001$  (dataset-1) and  $r(105) = .60, p < .001$  (dataset-2);
- Orientation of purpose in life [12,13]: Career-focused purpose orientation:  $r(157) = .68, p < .001$  (dataset-1) and  $r(105) = .62, p < .001$  (dataset-2).

## Conclusion

Having a valid and reliable instrument that measures flourishing in adults is important because of its profound impact on wellbeing of adults, which is why the availability of a psychometrically robust measurement tool for assessing this construct in the Ukrainian language becomes crucial. In this work, we translated and evaluated psychometric properties of the Flourishing Scale. The Ukrainian version of the Flourishing Scale showed evidence of construct validity and reliability, thereby resulting in a tool that can be used with Ukrainian adults to further examine their flourishing.

The current study along with published research [7] has already demonstrated that the Ukrainian Translation of the Flourishing Scale to possess psychometric properties indicative of its validity and reliability. However, additional research is necessary to strengthen the evidence of validity of this scale. This includes further assessments of convergent and divergent validity with other constructs, as well as investigation of its applicability across diverse contexts.

## Ethics statements

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committees and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Informed consent was obtained from all individual participants included in the study.

## Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

## CRedit authorship contribution statement

**Mariya A. Yukhymenko-Lescroart:** Conceptualization, Methodology, Formal analysis, Resources, Data curation, Writing – original draft, Writing – review & editing, Visualization, Visualization, Supervision, Project administration. **Olena Voiedilova:** Conceptualization, Methodology, Data curation, Writing – review & editing.

## Data availability

Data are shared as supplemental material

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## Supplementary materials

Supplementary material associated with this article can be found, in the online version, at [doi:10.1016/j.mex.2024.102702](https://doi.org/10.1016/j.mex.2024.102702).

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