

Psychometric validation of the Ukrainian-language SRIS-12 in adults aged 35–55

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Abstract. The Ukrainian psychological community currently lacks a fully validated short-form instrument for measuring self-reflection and insight in adult populations. Existing practice relies on translated or partially adapted versions of the original 20-item scale without meeting contemporary psychometric standards, which creates methodological limitations for research with adults navigating crisis conditions. The aim of this study was to adapt and conduct an initial psychometric validation of the Ukrainian-language version of the Self-Reflection and Insight Scale – Short Form in a community sample of adults aged 35-55 and older residing in Ukraine under wartime conditions. The adaptation followed a five-stage forward-backward translation protocol with expert panel review and pilot cognitive interviewing with the target age group. Data were collected via online survey in March 2026 (N = 332; 69.0% women; age range 35-55+). Psychometric analyses included internal consistency estimation, confirmatory factor analysis of the two-factor oblique model, and known-groups validity assessment. Internal consistency was good to excellent: Cronbach's alpha reached 0.845 for the Self-Reflection subscale, 0.791 for the Insight subscale, and 0.773 for the total scale. Confirmatory factor analysis confirmed the two-factor structure with acceptable fit, with all twelve factor loadings statistically significant. The inter-factor correlation was near-zero and non-significant, indicating that self-reflection and insight functioned as essentially independent dimensions in this crisis sample – a theoretically meaningful departure from findings in student populations. Known-groups analyses showed that women scored higher on self-reflection than men, and participants who experienced forced residential relocation showed reduced self-reflective engagement. Preliminary normative data are provided for the full sample and by age and gender subgroups. The recommended for use by clinical psychologists, crisis counsellors, and researchers working with adults aged 35 and above in wartime and post-conflict contexts, specifically for diagnosing reflective capacity, monitoring psychological dynamics in longitudinal studies, and designing targeted self-regulation interventions

Keywords: reflective functioning; private self-consciousness; scale adaptation; cross-cultural adaptation; middle adulthood; crisis context; wartime Ukraine

Introduction

Self-reflection and insight are conceptually related but analytically distinct dimensions of private self-consciousness, and the difference between them matters far more than a definitional distinction might suggest.

Self-reflection refers to the dispositional tendency to examine one's own thoughts, emotions, and behaviour – to turn attention inward, scrutinise feelings, replay events, and interrogate motivations. Insight, by

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contrast, denotes the achieved clarity of understanding of one's internal states and the motives that underlie one's actions. A person may engage in frequent and intense self-examination and still arrive at no stable or accurate understanding of what actually drives them; equally, occasional but well-directed reflection can yield genuine self-knowledge that habitual introspection fails to produce. This asymmetry has direct consequences for psychological functioning. High self-reflection without corresponding insight is associated with ruminative patterns – a circling inward that generates distress rather than resolution. Insight, when it emerges from effective self-reflection, supports adaptive self-regulation, accurate self-appraisal, and purposeful goal pursuit. The two dimensions therefore relate differently to wellbeing, to coping under pressure, and to the capacity for identity integration across the lifespan. It is precisely this non-equivalence that makes the two-dimensional measurement of reflective capacity worth pursuing – and that makes collapsing self-reflection and insight into a single composite index a methodological choice with real consequences for the accuracy of what is being measured.

For adults in the 35-55 age range, reflective capacity carries particular developmental weight, as demonstrated by several recent empirical studies. E. Reinilä *et al.* (2023) examined generativity development in a longitudinal study from age 42 to 61, finding that this period is characterised by significant identity reassessment and individual variability in developmental trajectories, underscoring that midlife is far from psychologically stable. G. John & M. Wani (2025) noted that midlife brings heightened awareness of mortality, career dissatisfaction, identity confusion, and relationship evaluation, and that these experiences converge around a heightened need for reassessment and readaptation. Within self-determination theory, autonomous regulation – acting from genuinely endorsed values rather than external demands – presupposes motivational self-knowledge of exactly the kind that insight is designed to capture (Ryan *et al.*, 2022). None of these frameworks treats reflection as a luxury; all of them, from different directions, position it as a constitutive element of adaptive adult functioning.

The relevance of measuring self-reflection and insight in adult populations has grown considerably over the period from 2020 to 2025. W. He & J. Gan (2025), in a meta-analysis of 39 studies totalling 12,496 participants, concluded that self-reflection is significantly associated with depression and anxiety, and that this relationship is moderated by cultural background and by the specific measurement instrument used – underscoring the methodological importance of culturally validated tools. K. Bucknell *et al.* (2024) demonstrated that the adaptive potential of self-reflection under stress is realised only when the reflective process results in genuine insight: without clarity of understanding,

self-reflection transforms into rumination and begins to undermine rather than support psychological functioning. Since February 2022, adults aged 35-55 in Ukraine have been navigating what can reasonably be described as a compound crisis – the normative developmental pressures of midlife coinciding with a sustained, large-scale non-normative stressor. Displacement, bereavement, the collapse of professional and family plans, and ongoing exposure to threat do not pause the ordinary work of midlife identity; they collide with it.

A. Kurapov *et al.* (2023) documented that nearly all surveyed Ukrainian university students and staff experienced a deterioration of psychological wellbeing following the onset of the full-scale invasion, with those directly exposed to hostilities showing the highest levels of anxiety, depression, and PTSD symptomatology. A. Kurapov *et al.* (2025) subsequently confirmed that this burden remains persistently elevated, with individuals exposed to active military operations reporting substantially higher levels of stress and trauma-related symptoms. C. Esposito *et al.* (2024) further noted that the simultaneous presence of multiple crisis stressors – armed conflict, pandemic, and climate threat – produces a compounding effect on wellbeing that exceeds the impact of any single stressor in isolation. A recent empirical review of M. Pocheheta (2026) conducted between 2022 and 2025 confirmed that growth under wartime conditions is not automatic but develops when individuals engage in an active process of meaning-making of the lived experience, requiring both individual resources and genuine insight into one's psychological responses.

Within the scope of this study, particular attention is paid to whether crisis conditions affect the two subscales differently: whether prolonged stress increases the tendency towards self-examination while reducing the clarity of insight, since this has direct implications for the interpretation of scores in applied settings. The action plan for the implementation of the Concept for the development of mental health care in Ukraine until 2030, approved by the Resolution of the Cabinet of Ministers of Ukraine No. 572-p (2024), calls for evidence-based psychological support for the war-affected population, and this requires instruments that have been properly validated in the Ukrainian adult context, not merely translated and deployed on the assumption that foreign norms apply. P. Silvia (2021) addressed these problems by developing the SRIS-12 through Item Response Theory applied to a sample of 1,192 participants. Rather than simply removing the weakest items from the original scale, they selected items based on discrimination and information parameters – a meaningfully different procedure that ensures retained items function well across the full range of the latent trait, not merely in the moderate range where most respondents cluster. The result is a 12-item scale on a 7-point format whose reliability matches or exceeds that of the full

version. It is appropriate to emphasise this distinction, because the IRT approach is what separates the SRIS-12 from generic abbreviated scales, and it is part of what justifies treating this version as the appropriate basis for a Ukrainian adaptation. S. Banner *et al.* (2024) subsequently confirmed the two-factor structure in a professional adult sample and developed a further revised short version – extending evidence for the instrument’s stability beyond students and providing a contemporary benchmark for cross-cultural validation work. The psychometric situation in Ukrainian psychology, however, does not currently support confident use of this instrument. Existing practice has relied on translated or partially adapted versions of the SRIS-20 without subjecting them to full validation procedures – that is, without confirmatory factor analysis, measurement invariance testing, systematic validity assessment, or estimation of test-retest reliability. Cross-cultural adaptation is not reducible to translation: as P. Cruchinho *et al.* (2024) have detailed in their practical guideline for measurement instrument adaptation, it requires structured verification of semantic, idiomatic, and conceptual equivalence at each stage, and without it the relationship between item content and latent construct cannot be assumed to hold across linguistic and cultural contexts.

Despite the growing body of evidence on the role of self-reflection and insight in psychological functioning under adversity, several aspects of this topic have received insufficient attention in the literature reviewed. First, the overwhelming majority of SRIS validation studies have been conducted on student samples, leaving the psychometric behaviour of the instrument in adult populations – particularly those aged 35 and above – largely unexamined. Second, existing cross-cultural adaptations of the SRIS have focused predominantly on Western European and East Asian contexts; the Ukrainian linguistic and cultural environment has not been addressed, despite the well-documented psychodiagnostic need created by the ongoing armed conflict. Third, while recent research has established that self-reflection and insight relate differently to mental health outcomes, no study to date has examined how the relationship between these two dimensions may shift under conditions of sustained wartime stress – specifically, whether crisis exposure decouples the SRIS-IN relationship that is consistently observed in non-crisis samples. Fourth, the 35-55 age cohort, which bears disproportionate occupational, familial, and civic burdens during wartime, has received no dedicated psychometric attention in the reflectivity measurement literature. The aforementioned gaps in existing research determined the need for the present study. The aim of the present study is to adapt and conduct an initial psychometric validation of the Ukrainian-language SRIS-12 in a community sample of adults aged 35-55 and older under wartime crisis conditions.

Materials and Methods

The baseline sample comprised 332 adults aged 35-55 who met the inclusion criteria and had experienced a significant self-realisation gap under the conditions of Russia’s full-scale armed invasion of Ukraine (February 2022 – present). Recruitment was conducted independently via a digital research funnel using the dedicated Telegram bot (@TheFutureMe_bot) and the Smart Sender platform, through purposive recruitment with elements of self-selection, ensuring that participation was open to any Ukrainian-speaking adult meeting the inclusion criteria regardless of occupational or institutional affiliation. The Ukrainian-language version of the SRIS-12 was developed following the five-stage forward-backward translation protocol recommended by V. Sousa & W. Rojjanasirrat (2011).

In the first stage, two independent bilingual translators – a psychologist and an English philologist, both native Ukrainian speakers – produced separate Ukrainian translations of the original English items without consulting one another. The two versions were then compared in a synthesis meeting, discrepancies were resolved through discussion, and a consensus Ukrainian version was produced, with all decisions documented. A third bilingual translator, blind to the original English text, translated the consensus version back into English to check for semantic drift. The resulting back-translation was evaluated by an expert panel of three to five qualified psychologists, who assessed the semantic, idiomatic, and conceptual equivalence of each item using a four-point rating scale; a Content Validity Index (CVI) of 0.80 or higher was required for item retention. No conceptual modifications were introduced at any stage – the adaptation is strictly linguistic, preserving the original item content and response format. Prior to the main data collection, an online pilot cognitive interview was conducted with ten to fifteen adults from the target age group (35-55 years) to verify that item wording was clear and naturally phrased in Ukrainian. Item order was randomised during administration, as recommended by P. Silvia (2021), though items are grouped by subscale in the present report for analytical clarity.

The target population comprised Ukrainian-speaking adults aged 35 years and older residing in Ukraine during the ongoing armed conflict. The 35-55 age range was selected because this cohort simultaneously navigates the normative developmental challenges of midlife and bears disproportionate occupational, familial, and civic burdens during the ongoing armed conflict, making it the population most in need of validated reflectivity measurement tools in the current Ukrainian context. Inclusion required: age 35 or above, Ukrainian language proficiency sufficient for independent questionnaire completion, and provision of informed electronic consent. Responses with missing data on any SRIS-12 item were excluded from psychometric analyses. Data were collected via an online survey

distributed during March 2026, specifically between March 02 and March 27, 2026, through Facebook communities and Telegram channels, using a combined purposive and snowball sampling strategy. To ensure adequate subsample size for known-groups validity and differential item functioning analyses by gender, a targeted supplementary recruitment wave was conducted via direct invitation through Telegram and Viber, specifically reaching male adults within the target age range. The final sample comprised $N = 332$ participants following recommendations for stable confirmatory factor analysis solutions with short two-factor scales (Wolf *et al.*, 2013). Participants were not offered any incentive for participation.

A key design feature of the sampling strategy was the collection of crisis exposure data through a structured multi-select demographic item listing specific crisis types: wartime events and security situation, professional burnout, financial difficulties, family difficulties, bereavement, and residential relocation. For analytical purposes, respondents were classified into two groups: those reporting wartime exposure only ($n = 130$) and those reporting wartime exposure combined with at least one additional stressor – compound crisis ($n = 200$). Two respondents who reported no crisis exposure were retained in the full sample for psychometric analyses but excluded from crisis-type group comparisons. The Self-Reflection and Insight Scale – Short Form (SRIS-12) (Silvia, 2021), in its Ukrainian-language adaptation, consists of 12 items distributed across two subscales: Self-Reflection (SR; items 1-6), which captures the dispositional tendency to engage in self-examination, and Insight (IN; items 7-12), which reflects the clarity of understanding of one's internal states and motives. Responses are provided on a seven-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Five items in the Insight subscale (items 7, 8, 9, 10 and 11) are reverse-scored prior to analysis using the formula: reversed score = $8 - \text{obtained score}$. Item 12 is scored directly. Subscale scores range from 6 to 42; the total SRIS-12 score ranges from 12 to 84, with higher scores indicating greater reflective capacity. Demographic information collected included age group (35-39 / 40-44 / 45-49 / 50-55+), gender, educational level, primary occupational domain, employment status, settlement type, residential displacement due to crisis events, self-rated material wellbeing, and crisis type as described above.

All analyses were conducted in Jamovi version 2.2.5. Prior to the main analyses, reversed items (7-11) were recoded using the formula $8 - x$, and descriptive statistics – means, standard deviations, skewness, and kurtosis – were computed at both item and subscale level to assess distributional properties and screen for floor or ceiling effects. Internal consistency was estimated using Cronbach's α and McDonald's ω for the SR subscale, the IN subscale, and the total SRIS-12,

accompanied by corrected item-rest correlations and item-level "if dropped" indices. The factorial structure of the scale was evaluated through confirmatory factor analysis (CFA) of a two-factor oblique model, replicating the structure reported by P. Silvia (2021). Model fit was assessed against the following criteria: CFI ≥ 0.95 , TLI ≥ 0.95 , RMSEA ≤ 0.08 , and SRMR ≤ 0.08 (Hu & Bentler, 1999). Validity evidence was examined at two levels: structural validity, assessed through the CFA, and known-groups validity, assessed through Mann-Whitney U tests comparing SRIS-12 scores across groups expected to differ on theoretical grounds – gender, crisis type, residential relocation status, and age subgroup. Kruskal-Wallis tests were used for age subgroup comparisons. Effect sizes are reported as:

$$r = Z/\sqrt{N}, \quad (1)$$

where r is the effect size; Z is the standardised test statistic derived from the Mann-Whitney U or Kruskal-Wallis H test; N is the total sample size. Preliminary normative data – means, standard deviations, and percentile distributions – are reported for the full sample and by age subgroup (35-39 / 40-44 / 45-49 / 50-55+) and gender. Test-retest reliability assessment is planned as a follow-up study; the present report provides cross-sectional reliability estimates only. The study was conducted in accordance with the ethical principles of the Declaration of Helsinki (World Medical Association, 2013). All participants provided informed electronic consent prior to accessing the survey; consent was voluntary, and withdrawal was possible at any point without consequence. No personally identifying information was collected. The full anonymised dataset is openly available through the Open Science Framework (OSF) (Dmytriiev & Voloshyna, 2026), consistent with open science standards for psychometric validation research.

The present study has several limitations. Online purposive and snowball sampling may introduce self-selection bias, as participants willing to complete a psychological survey during wartime are likely more reflective than the general population. External criterion validity was not assessed due to the absence of convergent and discriminant validity instruments in the survey battery; establishing the relationship between SRIS-12 scores and theoretically related constructs remains a priority for future research. Test-retest reliability was not examined, and temporal stability of scores should be addressed in follow-up studies given the dynamic nature of psychological functioning under prolonged crisis. Finally, the planned differential item functioning analysis by crisis type could not be conducted within the scope of this study and is recommended for future work with larger and more evenly distributed subsamples. The full anonymised dataset supporting the findings of this study, including all 12 SRIS-12 item scores, computed subscale and total scores, and

demographic variables, is publicly available on the Open Science Framework (OSF) (Dmytriiev & Voloshyna, 2026). The dataset is accompanied by a README file describing all variables, scoring procedures, and reversal coding. Raw data are provided alongside computed scores; items 7-11 are reverse-scored in the deposited file (formula: $8 - \text{obtained score}$). To recover the original raw responses, researchers may reapply the same transformation, as the operation is mathematically reversible: $(8 - (8 - x) = x)$.

Results

Sample description

The final sample comprised 332 adults aged 35 years and older ($M = 43.10$, $SD = 5.48$, estimated from age band midpoints). The gender distribution was as follows: 229 women (69.0%) and 103 men (31.0%). By age subgroup, 114 participants (34.3%) fell in the

35-39 range, 87 (26.2%) in the 40-44 range, 75 (22.6%) in the 45-49 range, and 56 (16.9%) were aged 50 and above. The majority of respondents held higher education qualifications – bachelor's, master's, or postgraduate degrees ($n = 206$, 62.0%) – were employed full time ($n = 214$, 64.5%), and resided in large urban centres ($n = 220$, 66.3%). Full sample demographic characteristics are presented in Table 1. In terms of crisis exposure, 319 participants (96.1%) reported experiencing significant life difficulties in the preceding three years. Wartime events and the security situation were the most frequently endorsed crisis type, either alone ($n = 130$, 39.2%) or in combination with additional stressors – most notably professional burnout, which co-occurred in 152 cases (45.8%), family difficulties ($n = 49$, 14.8%), or bereavement ($n = 33$, 9.9%). Eighty-nine participants (26.8%) had relocated from their place of residence due to crisis events.

Table 1. Sample demographic characteristics (N = 332)

Variable	n	%
Gender		
Female	229	69.0
Male	103	31.0
Age group		
35-39	114	34.3
40-44	87	26.2
45-49	75	22.6
50-55+	56	16.9
Education		
Higher (bachelor / master)	176	53.0
Postgraduate / doctoral degree	30	9.0
Vocational / specialised secondary	73	22.0
Secondary	53	16.0
Employment status		
Full-time employed	214	64.5
Self-employed / entrepreneur	47	14.2
Part-time employed	41	12.3
Temporarily not working	30	9.0
Settlement type		
Large city	220	66.3
Small city	87	26.2
Village	25	7.5
Crisis exposure		
Experienced significant difficulties	319	96.1
Wartime events only	130	39.2
+ Professional burnout	152	45.8
+ Family difficulties	49	14.8
+ Bereavement	33	9.9
Relocated due to crisis events	89	26.8

Note: age M and SD are estimates based on age band midpoints (37, 42, 47, 52). Burnout, family difficulties, and bereavement figures reflect all respondents endorsing each stressor, including those who selected multiple crisis types simultaneously

Source: authors' own calculations based on survey data (N = 332, March 2026)

Item analysis

Descriptive statistics for all 12 items are presented in Table 2. Means and standard deviations are reported with items 7-11 in their reversed form (scored $8 - x$) to facilitate directional comparability across subscales. Item means for the Self-Reflection subscale ranged from 4.64 to 4.99 (SD range: 1.18-1.35), indicating that respondents in this crisis sample tended toward moderate-to-high levels of self-examination. Item means for the Insight subscale (items 7-11 reversed, item 12 direct) ranged from 3.37 to 5.27 (SD range: 1.15-1.37),

with item 12 showing a notably lower mean than the remaining Insight items, suggesting that clarity of insight was less consistently endorsed than the reflective tendency captured by the SR subscale. Skewness and kurtosis values fell within acceptable limits for all 12 items ($|skewness| \leq 1.12$, $|kurtosis| \leq 2.43$), supporting the use of maximum likelihood estimation in the confirmatory factor analysis. Items 7-11 showed mild negative skewness consistent with ceiling proximity after reversal – a pattern commonly observed in crisis samples where low insight clarity is prevalent.

Table 2. Item descriptive statistics for the Ukrainian-language SRIS-12 (N = 332)

Item	Item text	Sub-scale	M	SD	Skewness	Kurtosis
1	Я часто аналізую свої почуття (I often analyse my feelings)	SR	4.75	1.27	-0.07	-0.45
2	Я регулярно приділяю час для осмислення власних думок (I regularly set aside time to reflect on my own thoughts)	SR	4.64	1.35	-0.17	-0.24
3	Я часто замислююся над тим, як я ставлюся до різних речей у житті (I often find myself thinking about how I feel about different things in life)	SR	4.76	1.23	-0.15	-0.41
4	Для мене важливо оцінювати те, що я роблю (It's important to me to reflect on what I do)	SR	4.90	1.27	-0.25	-0.12
5	Мені дуже цікаво вивчати власні думки та внутрішні стани (I find it really interesting to explore my own thoughts and inner states)	SR	4.92	1.24	-0.32	-0.07
6	Для мене важливо намагатися зрозуміти, що означають мої почуття (It's important for me to try to understand what my feelings mean)	SR	4.99	1.18	-0.38	0.26
7 _r	Я часто відчуваю розгубленість щодо того, що насправді відчуваю (I often feel at a loss as to what I'm actually feeling)	IN	5.05	1.15	-1.12	2.43
8 _r	Я часто усвідомлюю, що переживаю якесь почуття, але не розумію яке саме (I often realise that I'm experiencing a certain feeling, but I don't know exactly what it is)	IN	5.20	1.33	-1.10	1.38
9 _r	Моя власна поведінка нерідко мене дивує (My own behaviour often surprises me)	IN	5.27	1.27	-0.93	1.10
10 _r	Коли я думаю про свої думки, це лише заплутує мене ще більше (When I think about my thoughts, it just confuses me even more)	IN	5.10	1.28	-0.90	1.18
11 _r	Мені часто важко осмислити те, що я відчуваю (I often find it hard to make sense of what I'm feeling)	IN	4.93	1.26	-0.72	0.55
12	Зазвичай я розумію, чому відчуваю те, що відчуваю (I usually understand why I feel the way I do)	IN	3.37	1.37	0.72	0.22

Note: SR = Self-Reflection subscale; IN = Insight subscale. Subscript _r indicates items reverse-scored prior to analysis (formula: $8 - \text{obtained score}$). Means and SDs for items 7-11 are reported in reversed form. Skewness and kurtosis computed on reversed scores for items 7-11

Source: authors' own calculations based on survey data (N = 332, March 2026)

Item reliability statistics are presented in Table 3. Corrected item-rest correlations ranged from 0.223 to .506 across all 12 items. Eleven items exceeded the recommended threshold of $r = 0.30$ (Nunnally & Bernstein, 1994). Item 12 yielded the lowest item-rest correlation at the total-scale level ($r = 0.223$) and

was the only item whose removal would marginally improve total-scale reliability (Cronbach's $\alpha = 0.778$, McDonald's $\omega = 0.786$ if dropped). Within the Insight subscale alone, however, item 12 showed an adequate item-rest correlation of $r = 0.320$, exceeding the recommended threshold.

Table 3. Item reliability statistics for the Ukrainian-language SRIS-12 (N = 332)

Item	Item text (abbreviated)	Sub-scale	M	Item-rest r	α if dropped	ω if dropped
1	Я часто аналізую свої почуття (I often analyse my feelings)	SR	4.75	0.452	0.752	0.760
2	Я регулярно приділяю час ... (I regularly set aside time to ...)	SR	4.64	0.389	0.760	0.765
3	Я часто замислююся ... (I often find myself thinking ...)	SR	4.76	0.430	0.755	0.761
4	Для мене важливо оцінювати... (It's important for me to assess...)	SR	4.90	0.506	0.747	0.754
5	Мені дуже цікаво вивчати... (I find it really interesting to study...)	SR	4.92	0.475	0.750	0.757
6	Для мене важливо намагатися... (It's important for me to try...)	SR	4.99	0.432	0.755	0.760
7 _r	Я часто відчуваю розгубленість... (I often feel at a loss...)	IN	5.05	0.450	0.753	0.770
8 _r	Я часто усвідомлюю... (I often realise...)	IN	5.20	0.434	0.754	0.771
9 _r	Моя власна поведінка нерідко мене дивує (My own behaviour often surprises me)	IN	5.27	0.406	0.757	0.773
10 _r	Коли я думаю про свої думки... (When I think about my thoughts...)	IN	5.10	0.371	0.761	0.776
11 _r	Мені часто важко осмислити... (I often find it hard to make sense of...)	IN	4.93	0.376	0.761	0.776
12	Зазвичай я розумію... (Usually, I realise...)	IN	3.37	0.223	0.778	0.786

Note: SR = Self-Reflection; IN = Insight. Subscript r = reverse-scored item. Item means are reported in reversed form for items 7-11. Item-rest correlations and "if dropped" indices are from the total-scale reliability analysis. α = Cronbach's alpha; ω = McDonald's omega. Total scale: α = 0.773, ω = 0.781

Source: authors' own calculations based on survey data (N = 332, March 2026)

Overall, the item-level analysis indicates satisfactory discriminative properties for 11 of the 12 items, with corrected item-rest correlations exceeding the recommended threshold of $r = 0.30$. Item 12 of the Insight subscale showed the lowest item-rest correlation ($r = 0.223$) and was the only item whose removal would marginally improve total-scale reliability; however, given its adequate performance within the IN subscale ($r = 0.320$) and statistically significant CFA loading ($\lambda = 0.473$, $p < 0.001$), it was retained in the final version of the scale. The pattern of item means – consistently higher for the SR subscale (range: 4.64-4.99) than for the reversed IN items (range: 4.93-5.27 before reversal, corresponding to low insight clarity after scoring) – is consistent with the theoretical expectation that crisis conditions may impair insight clarity while leaving self-reflective tendency relatively intact.

Internal consistency

Internal consistency estimates for the total SRIS-12 and both subscales are presented in Table 4. The Self-Reflection subscale demonstrated excellent reliability

(Cronbach's $\alpha = 0.845$, McDonald's $\omega = 0.846$), with item-rest correlations ranging from 0.574 to 0.665 – all well above the recommended .30 threshold. The Insight subscale showed good reliability ($\alpha = 0.791$, $\omega = 0.802$), with item-rest correlations ranging from 0.320 to 0.621 following internal reversal of items 7-11. For the total SRIS-12, Cronbach's $\alpha = 0.773$ and McDonald's $\omega = 0.781$. The close agreement between both estimators across all three scores indicates that the essential tau-equivalence assumption underlying α is approximately met, and that α does not substantially underestimate true reliability in this sample. All values exceeded the conventional 0.70 threshold recommended for research instruments (Nunnally & Bernstein, 1994). Item IN12 ("Зазвичай я розумію, чому відчуваю те, що відчуваю" / "I usually understand why I feel the way I do") showed the lowest item-rest correlation at the total-scale level ($r = 0.223$), and its removal would marginally improve total-scale reliability ($\alpha = 0.778$, $\omega = 0.786$). Within the IN subscale alone, however, item 12 yielded an item-rest correlation of $r = 0.320$, exceeding the recommended threshold.

Table 4. Internal consistency estimates for the Ukrainian-language SRIS-12 (N = 332)

Scale / Subscale	α	ω	Items	Item-rest range
Self-Reflection subscale (SR)	0.845	0.846	6	0.574-0.665
Insight subscale (IN)	0.791	0.802	6	0.320-0.621

Table 4. Continued

Scale / Subscale	α	ω	Items	Item-rest range
Total SRIS-12	0.773	0.781	12	0.223-0.506
Total SRIS-12 (without IN12)	0.778	0.786	11	0.371-0.506

Note: α = Cronbach's alpha; ω = McDonald's omega. Item-rest correlations are corrected (part-whole corrected). SR subscale: items 1-6, no reversal. IN subscale: items 7-12, items 7-11 reverse-scored (8 - x). The sensitivity row (without IN12) is provided for reference and does not constitute a recommendation to remove the item

Source: authors' own calculations based on survey data (N = 332, March 2026)

The internal consistency estimates presented in Table 4 confirm that the Ukrainian-language SRIS-12 meets the reliability standards required for research use, with all α and ω values exceeding the conventional 0.70 threshold across both subscales and the total scale, and with the close agreement between α and ω indicating that the essential tau-equivalence assumption is approximately satisfied in this sample.

Confirmatory factor analysis

A confirmatory factor analysis was conducted to evaluate the hypothesised two-factor oblique model in which items SR1-SR6 load on a Self-Reflection factor and items IN7-IN12 load on an Insight factor, with the two factors permitted to covary freely. The model was estimated using maximum likelihood with robust

standard errors (MLR estimator) in Jamovi version 2.2.5. Standardised factor loadings are reported in Figure 1 and Table 6. The two-factor model demonstrated acceptable fit to the data: CFI = 0.944, TLI = 0.930, RMSEA = 0.064 [90% CI [0.049, 0.079]], SRMR = 0.047. RMSEA and SRMR met the stringent criteria of ≤ 0.08 recommended by L. Hu & P. Bentler (1999). CFI and TLI fell marginally below the 0.95 threshold – by 0.006 and 0.020 respectively – but both exceeded the 0.90 criterion widely considered acceptable for applied psychometric research with non-student adult samples (Marsh *et al.*, 2004). The χ^2 test was statistically significant ($\chi^2(53) = 125.0$, $p < 0.001$), as expected given the sample size of 332; this result is not interpreted as evidence of poor fit given the known sensitivity of χ^2 to sample size.

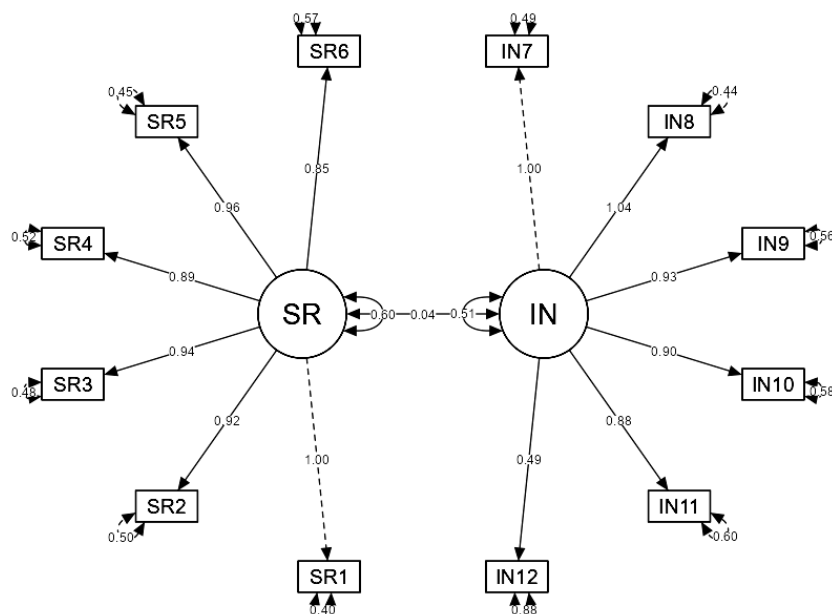


Figure 1. Standardised factor loadings for the two-factor oblique model of the Ukrainian-language SRIS-12 (N = 332)

Source: authors' own construction based on CFA results obtained in Jamovi 2.2.5

As shown in Figure 1, all standardised factor loadings were statistically significant ($p < 0.001$). SR subscale loadings ranged from 0.752 (SR6) to 0.930 (SR1), indicating strong indicator reliability across all six Self-Reflection items. IN subscale loadings ranged from 0.473 (IN12) to 0.995 (IN8). Five of the six Insight items showed strong loadings (0.806-0.995). Item IN12

yielded the lowest loading on the IN factor ($\lambda = 0.473$), though it remained statistically significant ($Z = 5.89$, $p < 0.001$) and above the conventional .40 minimum threshold for indicator retention (Hair *et al.*, 2019). The exceptionally high loading of IN8 ($\lambda = 0.995$) suggests this item functions as the most prototypical indicator of the Insight construct in this crisis sample and

warrants attention in future replication studies. The inter-factor covariance was small and non-significant (estimate = 0.109, SE = 0.065, $p = 0.095$), indicating that

Self-Reflection and Insight functioned as essentially independent dimensions in the present sample. Fit indices are presented in Table 5.

Table 5. Confirmatory factor analysis fit indices for the two-factor model of the Ukrainian-language SRIS-12 (N = 332)

Model	χ^2	df	p	CFI	TLI	RMSEA [90% CI]	SRMR
Two-factor oblique	125.0	53	< 0.001	0.944	0.930	0.064 [0.049, 0.079]	0.047
Recommended threshold	-	-	-	≥ 0.95	≥ 0.95	≤ 0.08	≤ 0.08

Note: CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; RMSEA = Root Mean Square Error of Approximation; SRMR = Standardised Root Mean Square Residual. Estimation method: maximum likelihood with robust standard errors (MLR). Recommended thresholds from L. Hu & P. Bentler (1999). $\chi^2 = 125.0$, df = 53, $p < 0.001$

Source: authors' own calculations based on survey data (N = 332, March 2026)

The fit indices presented in Table 5 indicate that the two-factor oblique model demonstrates acceptable fit to the data in the Ukrainian adult crisis sample, with RMSEA and SRMR meeting the stringent criteria of L. Hu & P. Bentler (1999) and CFI and TLI exceeding the widely accepted 0.90 threshold, collectively supporting the retention of the original two-factor structure without modification. The corresponding standardised loadings, standard errors and significance levels are presented in Table 6.

The standardised factor loadings presented in Table 6 confirm that all 12 items contribute meaningfully to their designated factors, with loadings ranging from 0.752 to 0.930 for the Self-Reflection subscale and from 0.473 to 0.995 for the Insight subscale – all statistically significant at $p < 0.001$ – while the near-zero and non-significant inter-factor covariance ($r = 0.109$, $p = 0.095$) indicates that self-reflection and insight functioned as essentially independent dimensions in this crisis sample, a finding discussed in the Discussion section.

Table 6. Standardised factor loadings for the Ukrainian-language SRIS-12 two-factor model (N = 332)

Item	Item text (abbreviated)	Factor	λ	SE	p
1	Я часто аналізую свої почуття (I often analyse my feelings)	SR	0.930	0.064	< 0.001
2	Я регулярно приділяю час ... (I regularly set aside time to ...)	SR	0.916	0.070	< 0.001
3	Я часто замислююся ... (I often find myself thinking ...)	SR	0.867	0.063	< 0.001
4	Для мене важливо оцінювати... (It's important for me to assess...)	SR	0.843	0.066	< 0.001
5	Мені дуже цікаво вивчати... (I find it really interesting to study...)	SR	0.892	0.063	< 0.001
6	Для мене важливо намагатися... (It's important for me to try...)	SR	0.752	0.063	< 0.001
7 _r	Я часто відчуваю розгубленість... (I often feel at a loss...)	IN	0.816	0.060	< 0.001
8 _r	Я часто усвідомлюю... (I often realise...)	IN	0.995	0.069	< 0.001
9 _r	Моя власна поведінка нерідко мене дивує (My own behaviour often surprises me)	IN	0.872	0.067	< 0.001
10 _r	Коли я думаю про свої думки... (When I think about my thoughts...)	IN	0.810	0.069	< 0.001
11 _r	Мені часто важко осмислити... (I often find it hard to make sense of...)	IN	0.806	0.068	< 0.001
12	Зазвичай я розумію... (Usually, I realise...)	IN	0.473	0.080	< 0.001

Note: SR = Self-Reflection factor; IN = Insight factor. λ = standardised factor loading. SE = standard error. Superscript r indicates reverse-scored items (formula: 8 – obtained score). All loadings significant at $p < 0.001$. Inter-factor covariance = 0.109 (SE = 0.065, $p = 0.095$), indicating near-orthogonal factor structure in the crisis sample

Source: authors' own calculations based on survey data (N = 332, March 2026)

Structural and known-groups validity

Validity evidence for the Ukrainian-language SRIS-12 was examined at two levels: structural validity, assessed through the confirmatory factor analysis

reported in Section 4.4, and known-groups validity, assessed through comparisons of SRIS-12 scores across groups expected to differ in self-reflection and insight on theoretical grounds. All results are presented in Table 7.

Table 7. Known-groups validity: SRIS-12 scores by crisis type, gender, relocation status, and age group (N = 332)

Comparison / Group	n	SR M (SD)	IN M (SD)	Total M (SD)	U	p	r
Crisis type							
Wartime only	130	28.38 (5.92)	17.48 (4.79)	45.86 (7.96)			
Compound crisis	200	29.34 (5.45)	18.02 (5.68)	47.35 (8.12)			
SR comparison					12218.0	0.355	0.051
IN comparison					12385.5	0.467	0.040
Total comparison					11671.5	0.116	0.086
Gender							
Female	229	29.40 (5.56)	17.62 (5.32)	47.02 (7.91)			
Male	103	28.02 (5.79)	18.24 (5.47)	46.26 (8.60)			
SR comparison					13533.5	0.031*	0.118
IN comparison					10705.0	0.177	0.074
Total comparison					12459.5	0.410	0.045
Residential relocation due to crisis							
Relocated	89	27.91 (6.54)	18.16 (5.39)	46.07 (9.25)			
Not relocated	243	29.36 (5.26)	17.69 (5.36)	47.05 (7.68)			
SR comparison					9254.0	0.044*	0.111
IN comparison					11395.0	0.452	0.041
Total comparison					9677.0	0.142	0.081
Age group (Kruskal-Wallis)							
35-39	114	28.88 (5.61)	18.11 (5.67)	46.98 (8.57)			
40-44	87	28.45 (6.33)	17.45 (4.79)	45.90 (8.42)			
45-49	75	29.28 (5.00)	17.28 (5.18)	46.56 (6.46)			
50-55+	56	29.55 (5.55)	18.52 (5.82)	48.07 (8.76)			
SR:							
IN:							
Total:							

Note: SR = Self-Reflection subscale (range 6–42); IN = Insight subscale (range 6–42); Total = total SRIS-12 score (range 12–84). All subscale scores computed on reversed items (items 7–11: 8 – x). Group comparisons used Mann-Whitney U tests (two-group) or Kruskal-Wallis H tests (age groups). Effect size $r = Z/\sqrt{N}$. * $p < 0.05$. Crisis type: wartime only = respondents endorsing wartime/security events exclusively; compound = wartime events plus at least one additional stressor

Source: authors' own calculations based on survey data (N = 332, March 2026)

The results presented in Table 7 provide preliminary known-groups validity evidence for the Ukrainian-language SRIS-12, demonstrating that the scale is sensitive to theoretically expected group differences – specifically, higher self-reflection in women relative to men and reduced self-reflection in individuals who experienced forced residential relocation – while the absence of significant differences by crisis type and age group supports the stability of reflective capacity across the 35–55+ range under wartime conditions and the appropriateness of unified normative data for this population.

Structural validity. The confirmatory factor analysis reported in Section 4.4 provides the primary source of validity evidence for the Ukrainian-language SRIS-12. The two-factor solution was confirmed in this sample with acceptable fit (CFI = 0.944, RMSEA = 0.064, SRMR = 0.047), all factor loadings statistically significant ($p < 0.001$), and a theoretically coherent factor structure in which SR and IN items loaded exclusively on their designated factors. The near-orthogonal inter-factor relationship ($r = 0.109$, $p = 0.095$) is itself a

structurally meaningful finding, discussed in the Discussion section.

Crisis type. Participants experiencing compound crisis (wartime exposure combined with at least one additional stressor; $n = 200$) showed marginally higher mean scores on both subscales and the total scale compared to those reporting wartime exposure only ($n = 130$), but none of these differences reached statistical significance (SR: $U = 12,218.0$, $p = 0.355$, $r = 0.051$; IN: $U = 12,385.5$, $p = 0.467$, $r = 0.040$; total: $U = 11,671.5$, $p = 0.116$, $r = 0.086$). Effect sizes were negligible across all three comparisons. This pattern suggests that, at least in the present sample, the accumulation of additional stressors beyond wartime exposure did not systematically alter self-reflective functioning as measured by the SRIS-12 – a finding that may reflect ceiling effects in crisis exposure or the relatively homogeneous nature of the sample in terms of overall crisis burden.

Gender. Women scored significantly higher than men on the Self-Reflection subscale (female: $M = 29.40$, $SD = 5.56$; male: $M = 28.02$, $SD = 5.79$; $U = 13,533.5$, $p = 0.031$, $r = 0.118$). This small but statistically

significant difference is consistent with a well-documented pattern in the reflectivity literature whereby women tend to engage in self-examination more frequently than men (Grant *et al.*, 2002; Silvia, 2021). No significant gender differences were observed for the Insight subscale ($U = 10,705.0$, $p = 0.177$, $r = 0.074$) or the total scale ($U = 12,459.5$, $p = 0.410$, $r = 0.045$), suggesting that clarity of understanding of one's internal states is similarly distributed across genders in this sample.

Residential relocation. Participants who had relocated due to crisis events ($n = 89$) showed significantly lower Self-Reflection scores than those who had not reWlocated ($n = 243$; $M = 27.91$, $SD = 6.54$ vs. $M = 29.36$, $SD = 5.26$; $U = 9,254.0$, $p = 0.044$, $r = 0.0111$). This small but theoretically coherent effect suggests that the disruption associated with forced displacement may be associated with reduced self-reflective engagement – a finding consistent with research on the impact of acute environmental disruption on introspective capacity (Tedeschi & Calhoun, 2004). No significant differences in Insight or total scores were observed between relocated and non-relocated participants.

Age group. Kruskal-Wallis tests revealed no statistically significant differences in SR scores ($H(3) = 1.42$, $p = 0.702$), IN scores ($H(3) = 1.88$, $p = 0.597$), or total SRIS-12 scores ($H(3) = 1.03$, $p = 0.793$) across the four age subgroups (35-39, 40-44, 45-49, 50-55+). Mean scores were notably stable across age bands, ranging from 28.45 to 29.55 for SR and from 17.28 to 18.52 for IN. The absence of age-related differences within

the 35-55+ range is consistent with theoretical models positioning reflective capacity as a relatively stable psychological resource across the middle adult lifespan (McAdams & McLean, 2013), and supports the use of unified normative data across this age range rather than age-specific norms. Overall, the known-groups analyses provide preliminary evidence that SRIS-12 scores in this sample vary in theoretically expected directions: women show higher self-reflection than men, and individuals who experienced residential displacement show reduced self-reflective engagement. The absence of crisis-type and age-related differences further supports the internal coherence of the scale and the appropriateness of pooled normative data across the 35-55+ range.

Preliminary normative data

Preliminary descriptive norms for the Ukrainian-language SRIS-12 are presented in Tables 8 and 9, covering the full sample, gender subgroups, and age subgroups respectively. These norms are intended as reference values for researchers and practitioners working with Ukrainian-speaking adults aged 35 and above in crisis contexts; their generalisability is limited by the online convenience sampling strategy, the predominantly urban composition of the sample, and the wartime data collection context. Expanded normative research based on probability sampling is recommended before these values are used for individual-level clinical interpretation.

Table 8. Preliminary normative data for the Ukrainian-language SRIS-12: full sample and gender subgroups ($N = 332$)

Scale	n	M	SD	Min	Max	P25	P50	P75
Full sample								
SR subscale	332	28.97	5.66	13	42	25.0	30.0	33.0
IN subscale	332	28.92	4.52	6	42	27.0	29.5	31.0
Total SRIS-12	332	57.89	6.94	39	78	53.0	58.0	63.0
Female								
SR subscale	229	29.40	5.56	14	42	26.0	30.0	33.0
IN subscale	229	29.25	4.37	13	42	27.0	30.0	32.0
Total SRIS-12	229	58.65	6.85	39	77	54.0	59.0	64.0
Male								
SR subscale	103	28.02	5.79	13	42	24.0	29.0	32.0
IN subscale	103	28.20	4.77	6	42	27.0	29.0	31.0
Total SRIS-12	103	56.22	6.90	39	78	52.0	56.0	61.0

Note: SR = Self-Reflection subscale (range 6-42); IN = Insight subscale (range 6-42); Total = total SRIS-12 score (range 12-84). Scores computed with items 7-11 reverse-scored ($8 - x$). P25 = 25th percentile; P50 = median; P75 = 75th percentile. Shapiro-Wilk: SR $W = 0.985$, $p = 0.001$; IN $W = 0.922$, $p < 0.001$; Total $W = 0.995$, $p = 0.319$. These are preliminary norms based on a convenience sample; use caution for individual-level clinical interpretation

Source: authors' own calculations based on survey data ($N = 332$, March 2026)

Table 9. Preliminary normative data for the Ukrainian-language SRIS-12 by age subgroup

Age group	n	SR M	SR SD	IN M	IN SD	Total M	Total SD	Percentiles ^a
35-39	114	28.88	5.61	28.39	4.80	57.26	6.70	SR: 25/29/32 IN: 27/29/31 Tot: 53/57/62
40-44	87	28.45	6.33	29.31	4.10	57.76	7.14	SR: 25/29/33 IN: 28/30/32 Tot: 52/58/64
45-49	75	29.28	5.00	29.04	3.92	58.32	6.78	SR: 26/31/33 IN: 27/29/31 Tot: 52/60/63
50-55+	56	29.55	5.55	29.27	5.27	58.82	7.38	SR: 26/30/32 IN: 27/30/32 Tot: 54/58/62

Note: SR = Self-Reflection subscale; IN = Insight subscale; Tot = total SRIS-12. All scores computed with items 7-11 reverse-scored. ^aPercentiles reported as P25/P50/P75 (25th / median / 75th). No statistically significant age group differences were found (Kruskal-Wallis: SR $H(3) = 1.42$, $p = 0.702$; IN $H(3) = 1.88$, $p = 0.597$; Total $H(3) = 1.03$, $p = 0.793$), supporting the use of unified norms across the 35-55+ age range

Source: authors' own calculations based on survey data (N = 332, March 2026)

For the full sample (N = 332), mean scores were M = 28.97 (SD = 5.66) for the Self-Reflection subscale (theoretical range 6-42), M = 28.92 (SD = 4.52) for the Insight subscale (theoretical range 6-42), and M = 57.89 (SD = 6.94) for the total SRIS-12 (theoretical range 12-84). The striking similarity between SR and IN means (28.97 vs. 28.92) in this sample is noteworthy given the near-orthogonal inter-factor structure identified in the CFA (Section 4.4): participants in this crisis sample engaged in self-examination and possessed clarity of insight at comparable average levels, despite these two dimensions functioning largely independently of one another. Normality of score distributions was assessed using the Shapiro-Wilk test. The SR subscale ($W = 0.985$, $p = 0.001$) and IN subscale ($W = 0.922$, $p < 0.001$) showed statistically significant departures from normality, while the total SRIS-12 score was normally distributed ($W = 0.995$, $p = 0.319$). The departures from normality for the subscales are consistent with mild negative skewness observed in item-level distributions (see Section 4.2) and should be taken into account when selecting statistical methods in future research using the Ukrainian-language SRIS-12 – non-parametric alternatives are recommended when subscale scores are used as dependent variables in group comparisons.

Gender differences in normative scores were small but directionally consistent with the known-groups analysis (Section 4.5). Women showed marginally higher SR scores (M = 29.40, SD = 5.56) than men (M = 28.02, SD = 5.79), while IN and total scores were similar across genders. Practitioners are advised to consider gender-specific reference values when interpreting individual SR subscale scores, particularly at the upper and lower quartiles where the distributions diverge most clearly. Age subgroup norms are presented in Table 9. Mean scores showed a modest upward trend with age for both the SR subscale (range: 28.45-29.55) and

the total scale (range: 57.26-58.82), though these differences were not statistically significant (see Section 4.5). The stability of IN scores across age groups (range: 28.39-29.31) supports the theoretical position that insight clarity does not systematically change across the 35-55+ lifespan under crisis conditions. Median values and interquartile ranges are recommended as the primary normative reference points given the non-normal distribution of subscale scores.

Discussion

The present study set out to adapt and conduct an initial psychometric validation of the Ukrainian-language version of the Self-Reflection and Insight Scale – Short Form (SRIS-12) (Silvia, 2021) in a sample of adults aged 35-55 and older navigating crisis conditions in wartime Ukraine. The findings support the overall adequacy of the Ukrainian-language SRIS-12 as a research instrument for this population, while also revealing several theoretically meaningful patterns that distinguish the present validation from the original and that are worth examining in their own right. The validated Ukrainian-language scale was found reliable as its internal consistency estimates were good to excellent across all three scores: the Self-Reflection subscale demonstrated the strongest reliability ($\alpha = 0.845$, $\omega = 0.846$), followed by the Insight subscale ($\alpha = 0.791$, $\omega = 0.802$) and the total scale ($\alpha = 0.773$, $\omega = 0.781$). P. Silvia (2021), in the original SRIS-12 validation on a student sample of N = 1,192, reported SR $\alpha = 0.84$ and IN $\alpha = 0.76$ – the SR estimate is nearly identical, while the IN estimate is marginally higher, suggesting that the Ukrainian-language items function with comparable precision in an adult population.

S. Banner *et al.* (2024) validated the SRIS-12 with registered psychologists (N = 123) and reported sound internal consistency across both subscales, concluding

that the two-factor structure holds in professional adult samples – a finding the results of this study replicate in a broader community sample. W. He & J. Gan (2025), in a meta-analysis of 39 studies, noted that the relationship between self-reflection and mental health outcomes is moderated by the measurement instrument used, which underscores why the reliability properties documented in the present study carry direct methodological significance for Ukrainian research. The close agreement between Cronbach's α and McDonald's ω across all three scores indicates that the tau-equivalence assumption is approximately met, meaning α does not substantially underestimate true reliability – a distinction that matters when comparing reliability parameters across studies that report only one index.

The two-factor oblique model demonstrated acceptable fit (CFI = 0.944, TLI = 0.930, RMSEA = 0.064, SRMR = 0.047), with all standardised factor loadings statistically significant and ranging from 0.473 to 0.995. P. Silvia (2021) reported CFI = 0.947 and RMSEA = 0.060 in their original IRT-based validation – the fit indices obtained in the present study are strikingly close to these benchmarks, which constitutes strong evidence for structural equivalence of the Ukrainian-language adaptation. S. Banner *et al.* (2024) found that while both the full and short SRIS versions showed sound factor structure with psychologists, some items displayed low loadings – a pattern partially mirrored in IN12 finding (discussed below). Recent cross-cultural psychometric validation studies of S. Mahlaq *et al.* (2024) and R. Pastor-Cisneros *et al.* (2025) consistently apply CFI and TLI thresholds above 0.90 as the criterion for acceptable model fit, while treating the 0.95 criterion as indicative of excellent rather than minimally acceptable fit, which contextualises the results of this study (CFI = 0.944, TLI = 0.930) as within the acceptable range for a cross-cultural adaptation.

Whereas P. Silvia (2021) reported a moderate positive SR-IN correlation in their student sample, the present study found a near-orthogonal factor structure ($r = 0.109$, $p = 0.095$). K. Bucknell *et al.* (2024) demonstrated that self-reflection produces resilient outcomes only when it generates genuine insight, and that in the absence of insight, self-reflection devolves into rumination – a finding that helps interpret the near-orthogonal structure observed in the crisis sample of the present study: participants engaged in high self-examination without a corresponding advantage in insight clarity, consistent with the decoupling hypothesis. The lowest-performing item across the scale was IN12 (“Зазвичай я розумію, чому відчуваю те, що відчуваю” / “I usually understand why I feel the way I do”), with a total-scale item-rest correlation of $r = 0.223$ and a CFA loading of $\lambda = 0.473$. S. Banner *et al.* (2024) similarly identified variability in item performance across SRIS versions in their professional sample, noting low-loading items in both the full and short versions without

recommending removal – a position that is shared in the present study. J. Hair *et al.* (2019) specified 0.40 as the conventional minimum threshold for factor loading retention, which IN12 meets. Within the Insight subscale alone, IN12 yielded $r = 0.320$, exceeding the recommended 0.30 threshold – its weak total-scale correlation reflects the near-orthogonal factor structure rather than a genuine item deficiency. A sensitivity analysis confirmed that removing IN12 would improve total-scale reliability only marginally ($\Delta\alpha = 0.005$), which does not justify the loss of construct coverage. IN12 is the only positively keyed item in the Insight subscale, and its retention preserves the measurement balance of the original SRIS-12.

Two theoretically expected group differences were observed. Women scored significantly higher than men on the Self-Reflection subscale ($p = 0.031$, $r = 0.118$). This finding is consistent with a large-scale empirical study by J. Tyler *et al.* (2022), who surveyed 998 adults in the UK and found that women's self-reflection scores were consistently higher than men's across age groups, regardless of recent stress levels. M. Paż & A. Nowicka (2025), in an ERP study of older adults, found neurological evidence for sex differences in self-referential processing, with women showing stronger neural activation in self-conditions – consistent with the behavioural SR difference observed in the present study. M. Crane *et al.* (2026), in a qualitative study of non-ruminative self-reflection and resilience in emerging adults, noted that self-reflective capacity was expressed differently across genders, with women more likely to engage in constructive, growth-oriented self-focus. The present study considers these convergent findings from different methodological traditions to lend additional credibility to the gender difference observed in the data obtained. Regarding residential relocation, participants who had relocated due to crisis events showed significantly lower SR scores than those who had not relocated ($p = 0.044$, $r = 0.111$). This finding has not been directly examined in prior SRIS research, but is consistent with the broader literature on environmental disruption and introspective capacity: A. Kurapov *et al.* (2025) documented that Ukrainians directly exposed to military operations report substantially higher psychological burden, and it is plausible that the cognitive resources required for sustained self-examination are depleted when individuals must continuously adapt to disrupted living conditions. Neither crisis type nor age subgroup produced significant score differences, a pattern that is theoretically coherent – reflective capacity in the 35-55+ range appears stable across the middle adult lifespan under crisis conditions, a pattern consistent with E. Reinilä *et al.* (2023), whose longitudinal study documented those individual differences in identity development across midlife are substantial but that average reflective functioning remains relatively stable across the 42-61 age range.

The preliminary norms provided in this study represent the first reference values for the Ukrainian-language SRIS-12 in an adult crisis population. The SR and IN subscale means were nearly identical (28.97 and 28.92 respectively), which is unusual compared to validation studies in student samples where SR typically exceeds IN. P. Silvia (2021) reported higher SR than IN means in their student sample, a pattern also observed by S. Banner *et al.* (2024) in their psychologist sample. W. He & J. Gan (2025) noted in their meta-analysis that the relationship between self-reflection and mental health indicators is culturally moderated. The observed convergence of SR and IN means may reflect a culturally and contextually specific pattern in which wartime conditions equalise the two dimensions by suppressing insight clarity toward the level at which self-reflection typically operates in crisis. K. Bucknell *et al.* (2024) demonstrated in a randomised controlled trial that self-reflective writing interventions improve resilience outcomes, particularly when focused on successful coping experiences – a finding that suggests the elevated SR scores in the present sample could represent an adaptive resource if channelled appropriately through structured intervention. M. Crane *et al.* (2026) further emphasised that non-ruminative self-reflection, distinguished from rumination by its constructive and solution-focused character, is associated with resilience enhancement – which underscores the practical value of measuring these two dimensions separately in crisis-affected adults, precisely what the Ukrainian-language SRIS-12 enables practitioners to do. These norms should be interpreted with appropriate caution: they reflect an online convenience sample with predominantly urban composition and should not be applied to individual clinical assessment without further validation on representative and clinical samples.

Taken together, the present findings are consistent with and extend recent work on the SRIS across adult and professional populations (Banner *et al.*, 2024; Silvia, 2021). They also align with recent research on self-reflection and mental health (He & Gan, 2025). In addition, the findings complement studies on reflective functioning under conditions of stress and crisis (Bucknell *et al.*, 2024; Kurapov *et al.*, 2025; Crane *et al.*, 2026). The Ukrainian-language SRIS-12 demonstrates adequate psychometric properties for research use with adults aged 35 and above in crisis conditions, and the near-orthogonal SR-IN structure observed in this sample constitutes a substantive theoretical contribution to understanding reflective functioning in wartime populations. Conceptualising the above, it can be asserted that the Ukrainian-language SRIS-12 demonstrates adequate psychometric properties for research use with adults aged 35 and above in crisis conditions. The instrument successfully replicates the original two-factor structure, shows good to excellent

reliability, and produces theoretically coherent group differences. The near-orthogonal SR-IN relationship and the convergent SR-IN means observed in this sample are not psychometric artefacts but substantive findings about the nature of reflective functioning under sustained wartime stress – findings that enrich, rather than undermine, the theoretical value of the adaptation.

Conclusions

This study presented the first fully validated Ukrainian-language version of the Self-Reflection and Insight Scale – Short Form, adapted for and validated in a community sample of adults aged 35-55 and older under wartime crisis conditions in Ukraine ($N = 332$). The Ukrainian-language SRIS-12 demonstrated good to excellent internal consistency across all three scores: Cronbach's $\alpha = 0.845$ and McDonald's $\omega = 0.846$ for the Self-Reflection subscale, $\alpha = 0.791$ and $\omega = 0.802$ for the Insight subscale, and $\alpha = 0.773$ and $\omega = 0.781$ for the total scale – all exceeding the 0.70 threshold recommended for research instruments. The original two-factor structure was confirmed through confirmatory factor analysis with acceptable fit ($CFI = 0.944$, $TLI = 0.930$, $RMSEA = 0.064$, $SRMR = 0.047$), with all twelve factor loadings statistically significant.

Known-groups validity analyses produced theoretically coherent findings: women showed higher self-reflection than men, and individuals who had experienced residential displacement due to crisis events showed reduced self-reflective engagement relative to those who had not relocated. Two findings of particular theoretical significance emerged from this validation. First, the inter-factor correlation between Self-Reflection and Insight was near-zero and non-significant ($r = 0.109$, $p = 0.095$), indicating that in this wartime sample the two dimensions functioned essentially independently. This is to be not considered a psychometric limitation but a substantively important observation: under conditions of prolonged existential stress, the tendency to engage in self-examination does not translate automatically into clarity of understanding of one's internal states. Second, item IN12 showed a low total-scale item-rest correlation ($r = 0.223$) but performed adequately within the Insight subscale ($r = 0.320$) and produced a significant CFA loading ($\lambda = 0.473$, $p < 0.001$). Both findings are interpreted as psychologically meaningful features of the instrument's behaviour in a crisis population rather than grounds for scale modification.

Preliminary normative data – means, standard deviations, and percentile distributions – are provided for the full sample and by age and gender subgroups, constituting the first reference values for the Ukrainian-language SRIS-12 in an adult population. The full anonymised dataset has been deposited on the Open Science Framework (OSF) to facilitate replication,

further validation, and cross-cultural comparison. Future research should prioritise: establishing test-retest reliability over repeated measurement intervals; assessing convergent and discriminant validity using external criterion measures (metacognitive awareness, psychological well-being, anxiety, depression); conducting measurement invariance testing across gender and crisis-type subgroups; validating the instrument in clinical populations including those with trauma-related presentations; and developing expanded normative data based on probability sampling. Establishing the temporal stability of the Ukrainian-language SRIS-12 and its external validity relationships are identified as the most pressing next steps toward full psychometric characterisation of this instrument in the Ukrainian adult context.

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Conflict of Interest

None.

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Психометрична валідація україномовної версії SRIS-12 серед дорослих віком 35–55 років

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Анотація. Українська психологічна спільнота наразі не має повністю валідизованого короткого інструменту для вимірювання саморефлексії та саморозуміння (інсайту) в дорослих популяціях. Існуюча практика використання перекладених або частково адаптованих версій оригінальної 20-пунктової шкали створює методологічні обмеження для досліджень з дорослими, які переживають кризові умови. Метою дослідження була адаптація та початкова психометрична валідизація україномовної версії Шкали саморефлексії та інсайту – короткої форми (цільова вибірка 35-55+ років) в умовах воєнного стресу. Адаптацію здійснено за п'ятиетапним протоколом прямого і зворотного перекладу з експертною оцінкою і когнітивним інтерв'ю. Дані зібрано в березні 2026 року ($N = 332$; 69,0 % жінок; вік 35-55+). Внутрішня узгодженість була високою: альфа Кронбаха становила 0,845 для субшкали саморефлексії, 0,791 – інсайту і 0,773 – для загальної шкали. Підтверджувальний факторний аналіз підтвердив двофакторну структуру з задовільним рівнем відповідності; всі дванадцять факторних навантажень статистично значущі. Близький до нульового кореляційний зв'язок між факторами свідчить, що в умовах воєнного стресу саморефлексія і саморозуміння функціонують як практично незалежні дименсії. Аналіз відомих груп показав, що жінки мають вищий рівень саморефлексії, ніж чоловіки, а вимушені переселенці демонструють нижчу саморефлексію. Україномовна версія SRIS-12 рекомендована для використання клінічними психологами, кризовими консультантами та дослідниками, які працюють із дорослими віком 35 років і старше в умовах воєнного та постконфліктного контексту, зокрема для діагностики рефлексивної здатності, моніторингу психологічної динаміки в лонгітюдних дослідженнях та розроблення цілеспрямованих інтервенцій із саморегуляції

Ключові слова: рефлексивне функціонування; приватна самосвідомість; адаптація методики; крос-культурна адаптація; середня дорослість; кризовий контекст; воєнна Україна