

The Integrated Spiritual Intelligence Scale (ISIS): Examining Psychometric Properties and Measurement Invariance in a Sample of Romanian Employees

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Abstract: *The 83-item Integrated Spiritual Intelligence Scale (ISIS) is one of the most widely used psychological tools for measuring spiritual intelligence in academic studies and real-world settings. However, its factor structure has been subject to some debate. To date, no study has been carried out using a sample of Romanian employees to test the reliability and validity of the ISIS or its factorial structure. Data were collected from twelve different study groups, involving a total of 342 Romanian employees. Using a one-stage sampling process, exploratory factor analysis (EFA) was conducted on a randomly selected pilot sample (N=168), followed by confirmatory factor analysis (CFA) on an independent group (N=174). The EFA identified three factors by Kaiser's criterion, accounting for 58.4% of the total variance across all items. Three competing measurement models were tested with CFA. Model 1, a unidimensional solution with all 21 items loading on a single factor, fit poorly, $\chi^2=877.205$, $df=189$, $\chi^2/df=4.641$, $CFI=.660$, $TLI=.622$, $RMSEA=.145$, $SRMR=.127$. Model 2, a correlated three-factor model that distinguishes Consciousness, Transcendence, and Truth, showed substantially better fit, $\chi^2=379.748$, $df=186$, $\chi^2/df=2.042$, $CFI=.904$, $TLI=.892$, $RMSEA=.077$, $SRMR=.067$. Model 3, a bifactor specification with one general factor plus three orthogonal specific factors, yielded the best global fit indices, $\chi^2=300.371$, $df=168$, $\chi^2/df=1.788$, $CFI=.935$, $TLI=.918$, $RMSEA=.067$, $SRMR=.061$, but at higher complexity. However, near-null specific loadings, a Heywood anomaly, and weak general loadings render the bifactor model invalid. Balancing fit and parsimony, we retained the correlated three-factor structure as the final measurement model and interpreted scores at the level of the three dimensions. Multiple-group CFA evaluated the three-factor ISIS-21 across gender, residence, and professional domain. Using $\Delta CFI \leq .01$ and $\Delta RMSEA \leq .015$ as decision rules, configural, metric, and scalar invariance were supported for all three grouping variables; strict invariance was met only for residence, and equality constraints on latent means did not degrade fit in that comparison. These results justify comparisons of latent means across gender, residence, and professional domain, while comparisons of observed scores should be limited to residence. The findings indicate that the validated instrument meets the necessary psychometric standards and may serve as a useful tool for evaluating spiritual intelligence among Romanian employees.*

Keywords: *exploratory and confirmatory factor analysis; integrated spiritual intelligence scale (ISIS); psychometric validation; Romanian employees.*

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1. Introduction

Over the past decades, scholars have expanded the concept of intelligence to encompass more than logical and linguistic abilities. Emotional intelligence became prominent in education and business, and more recently, spiritual intelligence (SI) has emerged, reflecting a person's capacity to draw upon spiritual strengths, such as moral insight, meaning-making, and transpersonal awareness, to navigate life's challenges (Amram, 2007; Emmons, 2000b). While spirituality often refers to one's beliefs or experiences of the sacred, spiritual intelligence highlights the practical skills that harness these experiences for everyday resilience, ethical action, and personal growth. In occupational settings, SI matters because it connects to stress coping, ethical leadership, and authentic engagement. For instance, employees who can reflect deeply on the meaning of their work or tap into inner values report higher job satisfaction and lower burnout (Shanmughom, Jeevapriya, & Anbazhagan, 2024). In organisational studies, spiritual intelligence has been linked to reduced workplace ethical breaches, better team cohesion, and more mindful decision-making (Siswanti, Khairuddin, & Halim, 2021). Despite these promising links, measuring SI accurately remains a challenge, particularly in culturally diverse contexts. The Integrated Spiritual Intelligence Scale (ISIS) was developed to offer a comprehensive, yet concise, measure of core SI dimensions. It includes cognitive-reflective elements (such as perceiving deeper meaning), sensory-integrative capacities (including awareness of refinements), and self-regulation traits (including trust in higher guidance), resulting in an 83-item version refined into a 21-item core structure through exploratory factor analysis. International studies have demonstrated its internal consistency and structural coherence, but its validation in specific cultural environments remains limited. Romania provides a compelling setting for the study, given its spiritual landscape shaped by Orthodox Christian traditions, decades under communism, and a growing interest in spiritual practices and ethical workplace cultures (Datta, 2022; Gog, 2020). Romanian organisations now host retreats focused on silence and reflection, mindfulness workshops rooted in local traditions, and dialogues on spiritual values in leadership, suggesting that spiritual intelligence plays a genuine role in shaping workplace well-being and ethics. Until now, empirical research on SI in Romania is rare, and no validation studies have been conducted on ISIS within Romanian employee populations.

This study aims to refine a version of the ISIS scale as a valid and reliable measure of spiritual intelligence among Romanian workers. Specifically, we investigate its factor structure, internal consistency, and construct validity, using confirmatory factor analysis on a sample of 342 Romanian employees.

Our objectives are both theoretical and practical: we aim to establish whether SI, as operationalised by the ISIS-21, aligns with the lived experience of Romanian professionals, and secondly, to offer a psychometrically sound tool for organisational assessment and human resource development. By testing the ISIS scale in this context, we contribute to cross-cultural psychology, showing how spiritual intelligence manifests in distinctive cultural settings and enriching the global SI literature.

The paper is organised as follows. First, we review the theoretical framework of spiritual intelligence, examining competing measurement models and their relevance to workplace outcomes. Next, we describe our methodology, including sample characteristics and the CFA procedures used. Then we present the factor validation results and reliability assessments of the

ISIS-21. Finally, we discuss the implications for organisational practice and theory, note limitations, such as the cross-sectional design and reliance on self-report, and suggest pathways for future research, including invariance testing across demographic groups and exploring predictive applications in leadership and wellbeing outcomes.

2. Literature Review

2.1. Concepts and Cross-Cultural Challenges in Spiritual Intelligence Measurement

Since Gardner's groundbreaking proposal of multiple intelligences (Gardner, 2004), academic inquiry into traditional cognitive domains has been expanded to encompass the self, emotion, creativity, and spirituality. Spiritual intelligence (SI) emerged in the late 1990s as scholars were required to understand how existential reflection, moral meaning, and transcendence function as cognitive–emotional resources in everyday life. Rather than viewing spirituality simply as a set of beliefs or experiences, SI focuses on the ability to firmly apply existential understanding in navigating real-world challenges. Conceptually, SI can be understood as the capacity to connect one's spiritual resources, like purpose, compassion, ethical insight, and mindful presence, to enhance problem-solving, meaning-making, and self-regulation in daily life. Research indicates that SI is associated with greater resilience, enhanced mental and spiritual well-being (Emmons, 2000a), emotional intelligence, and positive social behaviours (Nunes et al., 2024), while also correlating with lower levels of stress, burnout, depression, and anxiety (Jos & Pandey, 2022). It sits beside emotional intelligence in a more comprehensive view of adaptive functioning, offering not just emotional acuity, but also existential depth when tackling adversity or ambiguity.

This discrepancy has practical implications, particularly in occupational settings. In roles characterised by stress and complexity, such as teaching, healthcare, or management, individuals often rely on SI to maintain equilibrium, derive meaning from routine and crisis, and act ethically amid uncertainty (Guiette & Vandembemt, 2016). Organisations that support spiritual capacities, such as reflection, value-driven decision-making, or ethical mindfulness, tend to foster cultures of resilience and well-being (Li & Hu, 2025).

A multitude of validated instruments have been developed to assess spiritual intelligence across diverse cultural and age demographics, each grounded in a distinct theoretical framework. The Spiritual Intelligence Self-Report Inventory (SISRI-24), a widely utilised instrument, assesses four key capacities and exhibits adequate psychometric strength. However, certain studies have raised concerns regarding its unidimensionality (Atroszko, Skrzypińska, & Balcerowska, 2021; King & Decicco, 2009). The Integrated Spiritual Intelligence Scale (ISIS) builds upon this perspective by categorising 22 subscales into five domains, thereby providing a more comprehensive assessment of spiritual aptitudes (Amram & Dryer, 2008). For younger populations, the Children's Spiritual Intelligence Scale (CSIS) has been demonstrated to capture fundamental elements such as meaning and self-understanding. A multitude of culturally adapted versions, including Turkish, Chinese, and Islamic scales, have been developed to reflect local spiritual values while maintaining reliability. Collectively, these instruments empower researchers to explore spiritual intelligence in diverse contexts and its relevance to overall well-being.

Despite its theoretical promise, measuring SI remains a challenging task. Existing instruments offer valuable insights but may lack cultural relevance or comprehensiveness. Amram & Dryer's (2008) Integrated Spiritual Intelligence Scale (ISIS) represents a more holistic effort (Eysenck & Keane, 2020), capturing cognitive, affective, behavioural, and somatic dimensions rooted in diverse spiritual traditions. Their 83-item measure evaluates capacities such as spiritual connection, sensory awareness, inner calm, and moral discernment. Nevertheless, ISIS has been validated primarily in culturally limited populations. Its relevance within Romanian organisational contexts remains unexplored. Although spiritual intelligence (SI) is increasingly recognised as a meaningful factor in human resource development and the promotion of ethical organisational culture, its relevance and specific expressions in Romanian organisational contexts remain largely underexplored (Datta, 2022). Romania's distinctive spiritual landscape, shaped by its Orthodox heritage, post-communist transition, and a deeply introspective cultural tone, gives rise to unique forms of organisational spirituality that differ significantly from Anglo-Saxon norms (Gog, 2020). In recent years, Romania has witnessed a marked increase in the availability of spiritual

development programmes and alternative spiritual movements. These programmes and movements are beginning to influence workplace ethics and the authenticity of employees.

International research suggests that SI can enhance employee performance, reduce stress levels, and promote ethical behaviour, implying that such approaches could also prove beneficial in Romanian workplaces (Shanmughom, Jeevapriya, & Anbazhagan, 2024). However, the lack of locally grounded empirical studies leaves open the question of how SI is expressed and experienced in Romanian organisational life. This discrepancy highlights the need for culturally sensitive research that acknowledges Romania's unique historical and spiritual contexts, rather than relying exclusively on frameworks developed in other regions (Mahmood et al., 2018).

Moreover, the original ISIS's length presents practical challenges in the context of workplace research and application. The development of a concise, psychometrically robust version would enhance feasibility without compromising theoretical integrity. Evidence suggests that fundamental SI dimensions, meaning true perception, transcendental awareness, and somatic presence, remain stable across cultures. Confirming their structure in Romanian settings would not only improve measurement, but also enable practical integration in organisational and employee development efforts.

Therefore, the objective of this study is to validate the construct of ISIS among Romanian employees by examining its factorial structure and psychometric properties.

2.2. Aim of the Study

Consistent with the general purpose of promoting the assessment of spiritual intelligence (SI) in occupational settings, this research aims to investigate the construct validity of the Integrated Spiritual Intelligence Scale (ISIS) in a Romanian sample (ISIS; Amram & Dryer, 2008). An important initial step was the careful translation and cultural adaptation of the ISIS, ensuring both linguistic accuracy and semantic equivalence were considered.. This step aimed to maintain the meaning of key core and concepts in the Romanian cultural and organisational context, where spiritual entities can be filtered through various socio-religious perspectives. Building on this groundwork, the study employed an applied psychometric approach, utilising exploratory and confirmatory factor analysis to empirically validate the theorised multidimensionality of the scale. More specifically, the research aimed to determine if the cognitive, affective, and sensory components identified by Amram & Dryer (2008) could be reliably demonstrated among Romanian employees. These dimensions express the way individuals cognitively perceive meaning, emotionally identify with transcendental values, and feel somatically grounded, all constructs assumed to underlie the manifestation of spiritual intelligence across cultures.

Secondly, our primary objective was to assess the internal consistency of the scale and the convergent and divergent validity (Campbell & Fiske, 1959) of its indicators. Therefore, the study examined whether the ISIS items consistently reflect theoretically corresponding subdimensions of SI and, at the same time, are distinct from other closely related psychological constructs, such as emotional intelligence or personality domains. In this way, the study aimed not only to establish the theoretical validity of the ISIS but also to provide evidence of whether the scale accurately measures its intended constructs within the Romanian occupational context. Recognising the practical limitations of lengthy self-report tools in applied workplace research, the study also explored the possibility of developing an abridged version of ISIS. This adaptation aimed to preserve the conceptual richness of the original scale while increasing its utility for organisational assessments, employee development programmes, and future cross-cultural investigations.

These objectives shaped four key research questions. First, does the factorial structure originally proposed by the authors, comprising cognitive, affective, and sensory dimensions, replicate among Romanian employees? Second, does the scale demonstrate psychometric soundness in terms of reliability and construct validity within this context? Third, can evidence be provided for both convergent and divergent validity consistent with theoretical

expectations? And finally, is it feasible to derive a shortened version of ISIS that remains culturally appropriate and statistically robust?

By addressing these questions, the present study contributes to the progressive refinement of spiritual intelligence as a measurable construct and supports the development of tools that can capture its dimensions across different cultural and professional environments. Moreover, it establishes the foundation for integrating SI more explicitly into the fields of organisational psychology and workplace well-being, offering a valuable resource for both researchers and practitioners interested in the intersection of personal meaning, resilience, and professional growth.

3. Methods

3.1. Participants and Procedure

A total of 342 Romanian employees participated in the study, who were recruited through professional networks, social media invitations, and organisational partnerships. Participants from the public and private sectors received an online survey link. Completing the survey assumed ethical informed consent. No personally identifiable data was collected. Participants' backgrounds are presented in Table 1 below summarises.

Table 1. Participant's background

Variable	N = 342
Age	48 (38, 54)
Seniority	22 (12, 30)
Gender	
Female	302 (88%)
Male	40 (12%)
Residence	
Urban	289 (85%)
Rural	53 (15%)
Professional domain	
Education and Research	205 (60%)
Non-education	137 (40%)
Occupational domain	
Arts, Culture, and Media	11 (3.2%)
Economics, Accounting, Administrative	47 (14%)
Health and Social Assistance	36 (11%)
Information Technology and Communications	16 (4.7%)
K-12 Education	190 (56%)
Legal and Judicial	10 (2.9%)
Other Categories	11 (3.2%)
Post-secondary education	8 (2.3%)
Research and Science	7 (2.0%)
Services and Commerce	6 (1.8%)

¹ Median (Q1, Q3); n (%)

3.2. Study Design

The research design employed a cross-sectional and quantitative design, intended to validate the Romanian version of the Integrated Spiritual Intelligence Scale (ISIS). This was not merely a theoretical exercise; the research was grounded in relevance and real-world experience, as highlighted by spiritual intelligence in the ongoing lives of working adults, who navigate a multitude of roles, responsibilities, and pressures. This study adopted an observational rather than an experimental design.

3.3. Ethical Aspects

The planning and completion of this study took ethical principles into systematic consideration, with all procedures conducted to preserve the dignity of the individuals, their autonomy, and psychological integrity. Given that spiritual beliefs and experiences are highly personal, the study paid careful attention to the language used, the process of obtaining consent, and the handling of data. Participation was optional, and all participants provided informed consent prior to enrolment. Consent procedures incorporated the study's purpose and procedures, possible risks and benefits, and the right to withdraw at no penalty. All answers were anonymised to maintain participant confidentiality. No personally identifiable information, including any name, email address, or IP address of respondents, was collected or stored in connection with this survey. Data were kept confidential on password-protected servers for the relevant period and were disseminated and made available to the primary investigators. As the construct of spiritual intelligence may elicit items referring to highly personal or existential experiences, special effort was made to avoid intrusive or prompting language in the item design. The questionnaire explored how people apply spiritual coping mechanisms to their lives, rather than probing into specific religious teachings or personal traumas. The participants were informed that there were no correct or incorrect answers and that the study was not designed to measure their beliefs, but rather to explore their perceptions and experiences. The study was conducted following approval from the Institutional Review Board Ethics Committee of Bucharest University, Romania, and prior to data collection.

3.4. Questionnaire

The Integrated Spiritual Intelligence Scale (ISIS) comprises 83 items (IS1–IS83), developed by Amram & Dryer (2008), for which explicit permission was granted to use and adapt the instrument in this research. ISIS is designed to measure multiple facets of spiritual intelligence as experienced over the past 6–12 months. Respondents rated each statement on a similar 6-point Likert scale reflecting the frequency of the described behaviour. The questionnaire covered cognitive, affective, and sensory aspects of spiritual life through experiential, reflective, and behavioural prompts. Items asked about transcendence and values, personal meaning making, self-awareness, body–mind connection, and intuitive choices. Demographic questions followed: gender identity, age, urban or rural residence, occupation, and seniority. Participation was voluntary, with explicit consent and confidentiality in line with GDPR.

3.5. Data Analysis

Data analysis was conducted using the Jamovi software environment and SmartPLS version 4 to investigate the factorial structure and psychometric properties of the Integrated Spiritual Intelligence Scale (ISIS) in a Romanian employee sample. Initial data screening was conducted to identify missing values, detect outliers, and validate the assumptions necessary for multivariate analysis. The dataset exhibited minimal missing data, which were addressed using the expectation maximisation (EM) procedure. This method estimates the most probable values based on the observed distribution, thereby preserving the integrity of the dataset without introducing bias. The research design employed a two-stage analytic approach. In the first stage, Exploratory Factor Analysis (EFA) was conducted on a randomly selected subsample of 168 participants using Jamovi's factor module. The analysis applied principal axis factoring as the extraction method, which is well suited for data that may not adequately address normality assumptions. To account for potential correlations among latent constructs, oblique rotation (oblimin) was employed. The number of factors retained was guided by Kaiser's criterion (eigenvalues greater than 1), inspection of the scree plot, and the conceptual alignment of the items. During the refinement process, certain items may be excluded from the structure based on two criteria commonly used in exploratory factor analysis. The first criterion pertains to factor loadings; items that do not reach a minimum threshold of .40 on any factor are generally considered weak contributors and may be removed.

(Hair Jr et al., 2014). They provide a weak signal about any latent factor, which reduces the coherence and interpretability of the structure. The second criterion relates to significant cross-loadings. If an item has high loadings on two or more factors, for example, similar or equal values on several dimensions, this indicates conceptual ambiguity. In practice, the item does not clearly distinguish between the proposed factors and risks, diluting the conceptual coherence of each dimension. In such cases, excluding the item can contribute to a more transparent and more interpretable structure.

A confirmatory factor analysis was conducted on a sample of 174 respondents using partial least squares structural equation modelling in SmartPLS 4. This choice is suitable for models with several latent variables and modest sample sizes, and it places fewer demands on indicator distributions. Model evaluation was performed by assessing overall fit using the standardised root mean square residual (SRMR), with values below .08 indicating a good fit. Additionally, the coefficient of determination (R^2), average variance extracted (AVE), composite reliability (CR), and factor loadings were examined. A good-fitting model was characterised by AVE values above .50, CR values above .70, and individual item loadings above .60. Discriminant validity was checked with the Fornell–Larcker criterion and the heterotrait–monotrait ratio. Items that showed weak loadings or cross-loadings were considered for exclusion, and the shortened form was reestimated to confirm stability and theoretical coherence (Hair Jr et al., 2014; Hair et al., 2019).

Internal consistency for each subscale was examined through composite reliability and Cronbach's alpha coefficients. Items that failed to meet thresholds for factor loading, cross-loading, or internal consistency were considered for exclusion in the development of a shortened version of the scale. This short version aimed to maintain conceptual richness while enhancing efficiency and cultural relevance for Romanian occupational settings. The resulting structure was retested in SmartPLS to confirm its psychometric robustness and alignment with theoretical expectations. This analytic strategy allowed for both an inductive exploration of the factorial structure and a deductive validation of its stability and theoretical coherence, providing a rigorous basis for the use of the ISIS in Romanian applied psychology research.

To ensure that the metric holds across key subgroups, measurement invariance was tested using a covariance-based structural equation modelling framework with multi-group confirmatory factor analysis, encompassing gender, residence, and professional domain, with decisions based on changes in fit rather than chi-square in isolation (Cheung & Rensvold, 2002; Kline, 2016). Models were fitted with robust maximum likelihood estimation (MLE). Decisions were based on changes in CFI and RMSEA, using thresholds of .010 and .015, while chi-square differences were treated as supplementary, as they are sensitive to sample size and group imbalance. When scalar invariance was considered, latent means were compared by fixing factor means across groups. These choices follow widely used recommendations for invariance testing in applied SEM (Putnick & Bornstein, 2016).

To verify that conclusions were not reliant on a single estimation routine, the retained correlated three-factor model was re-estimated in a Bayesian framework (Konold & Sanders, 2024) with weakly informative priors on loadings and residuals. Posterior predictive assessments confirmed the adequacy of the model, and the 95% credible intervals for the primary loadings excluded zero (van de Schoot et al., 2017). Dimensionality was also examined with spectral and network-based tools on the polychoric matrix. The eigenvalue profile, parallel analysis, and Exploratory Graph Analysis (Golino & Demetriou, 2017) with bootstrap resampling converged on a stable three-cluster solution, consistent with the CFA results.

4. Results

4.1. Descriptive Statistics. Analysis of Individual Items

The means and standard deviations of the 83-item ISIS scale are reported in Table 2. On average, item scores ranged from 2.41 (IS79) to 5.07 (IS80), suggesting variability in how participants endorsed different aspects of the scale. Most items hovered around the midpoint to

upper end of the 6-point scale, indicating moderate to high agreement with the items across the sample. Standard deviations ranged from 1.03 to 1.76, with higher values indicating greater variability in responses for items such as IS61 and IS78. In contrast, items such as IS28 and IS80, both with SDs close to 1.1, reflected more consensus among participants.

Table 2. Descriptive statistics (Mean, SD, Skewness, Kurtosis, and Item-rest correlation) for the original 83-item ISIS Scale

Item*	Mean	SD	Skewness	Kurtosis	Item-rest correlation
IS1	4.85	1.19	-0.7448	-0.5073	0.5543
IS2 ^a	5.27	1.07	2.0293	4.7072	0.0187
IS3	4.57	1.19	-0.5841	-0.3484	0.5217
IS4	4.36	1.24	-0.4435	-0.3074	0.4426
IS5	4.28	1.33	-0.5774	-0.3629	0.5411
IS6	4.45	1.22	-0.6307	-0.2094	0.5676
IS7	3.51	1.39	0.1216	-0.8699	0.2396
IS8	4.35	1.41	-0.5778	-0.4827	0.6314
IS9	3.41	1.25	0.4512	-0.3726	0.0839
IS10	4.09	1.26	-0.2622	-0.6487	0.4019
IS11	4.17	1.49	-0.3152	-0.9996	0.1568
IS12	4.00	1.54	-0.3468	-0.9569	0.5035
IS13 ^a	4.46	1.42	0.7063	-0.3072	0.0640
IS14	3.93	1.31	-0.0954	-0.7914	0.4959
IS15	4.51	1.33	-0.6462	-0.4579	0.6565
IS16	4.40	1.4	-0.5529	-0.7017	0.5184
IS17	4.11	1.48	-0.3664	-0.8889	0.4802
IS18 ^a	4.93	1.28	1.3299	1.1951	0.0557
IS19	3.80	1.61	-0.2121	-1.1330	0.5242
IS20	3.98	1.64	-0.3428	-1.1365	0.5675
IS21	4.67	1.32	-0.8154	-0.2612	0.488
IS22 ^a	4.81	1.27	1.3377	1.3753	0.1067
IS23 ^a	4.35	1.32	0.7386	0.1323	0.0302
IS24	4.77	1.25	-0.8896	-0.0245	0.7299
IS25	4.53	1.28	-0.6866	-0.2753	0.5938
IS26 ^a	4.49	1.45	0.8165	-0.2695	0.0257
IS27	4.15	1.4	-0.2722	-1.0196	0.4906
IS28	4.95	1.03	-0.8785	0.2874	0.6705
IS29	3.95	1.3	-0.2456	-0.6266	0.5218
IS30	4.34	1.34	-0.5040	-0.6312	0.5838
IS31	3.44	1.45	0.0997	-0.9300	0.1210
IS32	4.30	1.24	-0.3751	-0.6213	0.6558
IS33	3.22	1.48	0.3028	-0.8176	0.0794
IS34	4.04	1.5	-0.4022	-0.8046	0.6071
IS35	3.99	1.57	-0.3796	-0.9330	0.6831
IS36	3.84	1.35	-0.1453	-0.7955	0.4327
IS37	4.87	1.07	-0.8971	0.4751	0.7150
IS38	4.58	1.29	-0.7335	-0.1557	0.6983
IS39	3.99	1.53	-0.2992	-0.9392	0.5632
IS40	4.51	1.5	-0.7841	-0.4099	0.6285
IS41	2.71	1.69	0.6766	-0.8558	0.3872
IS42	4.68	1.21	-0.6606	-0.4466	0.6414
IS43	4.61	1.26	-0.6352	-0.4703	0.6210
IS44	2.99	1.42	0.3215	-0.8945	0.0590
IS45	4.69	1.29	-0.7357	-0.4898	0.6645
IS46	3.78	1.49	-0.1601	-0.9600	0.2753
IS47	4.73	1.24	-0.7891	-0.1249	0.6700
IS48	4.63	1.27	-0.7219	-0.2820	0.7700
IS49	4.44	1.33	-0.4974	-0.8338	0.7455
IS50	4.85	1.14	-0.8591	0.1135	0.6837
IS51	4.89	1.12	-0.8466	-0.0169	0.7279
IS52	4.80	1.23	-0.8969	-0.0661	0.6972
IS53	3.49	1.57	0.0569	-1.1349	0.1748
IS54	4.84	1.13	-0.7729	-0.2209	0.6941
IS55	3.61	1.28	0.1232	-0.7700	0.0989
IS56	4.98	1.17	-1.0904	0.5016	0.6321
IS57	4.12	1.66	-0.4572	-0.9957	0.6035

IS58	4.13	1.6	-0.4292	-0.9944	0.5541
IS59	4.71	1.37	-0.7871	-0.4014	0.6590
IS60 ^a	4.24	1.49	0.7561	-0.3982	-4.80e-4
IS61	3.93	1.76	-0.3391	-1.2333	0.4366
IS62	4.35	1.38	-0.5144	-0.7806	0.7038
IS63	3.57	1.49	0.0762	-1.0591	0.4801
IS64	4.23	1.47	-0.3879	-0.9442	0.6696
IS65	4.27	1.39	-0.4886	-0.7013	0.7487
IS66	4.08	1.53	-0.4583	-0.8572	0.622
IS67	4.89	1.28	-1.1638	0.6889	0.7477
IS68	4.93	1.22	-1.1578	0.7465	0.7151
IS69	4.79	1.23	-0.9376	0.3094	0.6435
IS70	4.80	1.2	-0.8243	-0.1502	0.7004
IS71	4.65	1.34	-0.9355	0.1721	0.7286
IS72	4.80	1.08	-0.8112	0.2866	0.6915
IS73	2.92	1.61	0.4846	-0.8861	0.2250
IS74	2.88	1.47	0.5090	-0.6663	0.1059
IS75	2.71	1.42	0.8038	-0.1330	0.1085
IS76 ^a	4.84	1.36	1.2411	0.8255	0.0279
IS77	4.51	1.3	-0.5976	-0.4843	0.583
IS78	3.01	1.62	0.3259	-1.0563	0.2311
IS79	2.41	1.4	0.9704	0.1172	0.0207
IS80	5.07	1.14	-1.2373	0.9442	0.6987
IS81	4.38	1.2	-0.5049	-0.2646	0.6727
IS82 ^a	4.59	1.64	1.0111	-0.1947	-0.0112

Note: *IS83 (*"I have been honest in all my answers, to the best of my knowledge"*) was excluded because it is a control item; ^a: reversed scaled item

Skewness and kurtosis values for all items (Table 2) fell within acceptable thresholds (± 3.00), implying that the data approximated normal distributions. However, a few items approached or exceeded values of ± 1.00 , such as IS2 (skewness = 2.03, kurtosis = 4.70), IS18, IS22, and IS67–IS80. These suggest a ceiling effect or skewed response patterns where most participants selected higher ratings. Conversely, items such as IS79 and IS75 demonstrated positively skewed distributions, indicating that responses were concentrated towards the lower end of the scale, with fewer participants selecting higher ratings. From a psychometric standpoint, item-rest correlations revealed substantial variance. Most items demonstrated moderate to strong positive correlations with the total score, supporting their internal consistency. Notably, IS48 (.7700), IS49 (.7455), IS65 (.7487), and IS67 (.7477) were among the highest, indicating that these items strongly align with the overall scale construct. On the other hand, several items flagged potential concerns. Items such as IS2 (.0187), IS13 (.0640), IS18 (.0557), IS22 (.1067), IS23 (.0302), IS26 (.0257), and IS82 (–.0112) showed weak or negative item-rest correlations, suggesting they may not reliably contribute to the construct measured by the scale. Some of these items also exhibited significant skewness and kurtosis, suggesting possible construct or phrasing issues that could compromise reliability. The reliability estimate for the full scale was excellent, with a Cronbach's α of .957. This suggests high internal consistency among items, although the inclusion of poorly correlating items may warrant further item analysis or refinement to optimise scale performance. Overall, while the ISIS scale appears psychometrically sound, future revisions may benefit from a closer examination of the handful of underperforming items, particularly those with low item-rest correlations and non-normal distributions, to assess their content validity and alignment with the scale's overarching construct.

4.2. Dimensionality. EFA Results

As a next step, we conducted exploratory factor analysis (EFA) with our pilot sample of 168 participants, which approaches recommended guidelines for the scale length (e.g., $N \geq 5-10$ per item). According to Costello & Osborne (2005) and MacCallum et al. (1999) recommend a minimum ratio of five to ten participants per item for an 83-item scale, which would mean at least 415 respondents. In contrast, there are cases where smaller samples can still produce stable factors,

particularly when item communalities are high and the factor structure is clear. MacCallum et al. (2001) caution against over-interpreting such results. In light of this, our EFA results (Table 2) should be treated as exploratory.

Out of the original 83 items, only 21 were retained after the exploratory factor analysis. This item reduction was not arbitrary. It followed two well-established criteria that are commonly used when refining a scale structure. The first relates to factor loadings. Items that did not load at least .40 on any factor were removed. That cut-off, drawn from recommendations such as those proposed by Hair Jr et al. (2014), helps to ensure that each item contributes meaningfully to at least one underlying dimension. Items below that threshold tend to exhibit weak factor saturation. The second criterion for exclusion items was related to substantial cross-loadings. Some items loaded on multiple factors with similar strength, which rendered their interpretation ambiguous. Taken together, these two criteria helped us refine the factorial structure. The final 21-items ISIS-RO plays a more precise and more reliable role in capturing the core dimensions of the scale.

Table 3. Exploratory factor analysis results. Factor loadings

<i>Dimension: Transcendence</i>		
Item	Item description	Factor loading
IS20	I rely on a daily spiritual routine, such as prayer or meditation, to cope with life's difficulties.	0.737
IS35	I connect with a higher, wiser self to find direction in life.	0.633
IS41	I turn to rituals, rites, or ceremonies when making changes in my life.	0.571
IS57	I let my life be guided by a higher power—whether universal energy, divinity, or nature—and thus live in balance.	0.883
IS58	My goals and objectives transcend the material realm of life.	0.710
IS59	When faced with difficulties, I rely on deep inner confidence or faith.	0.738
IS61	I feel that I am part of a cosmic organism or a universal whole.	0.612
IS64	Moments of ecstasy, enchantment, and reverence bring me clarity in the face of everyday difficulties.	0.679
IS66	I set aside time each day and each week for reflection and inner renewal.	0.666
<i>Dimension: Consciousness</i>		
IS43	I seek to acknowledge the unspoken, the hidden and the subtle.	0.525
IS45	I am in touch with my inner truth and what lies within me.	0.586
IS47	I appreciate the aesthetic and sensory details of my daily life.	0.613
IS50	I trust my instincts or intuition when making important decisions.	0.779
IS51	I pay close attention to what is said and what is left unsaid.	0.920
IS52	I pay attention to my five senses (sight, hearing, smell, taste, and touch) when performing my daily tasks.	0.893
IS54	I seek to discover and understand my weaknesses.	0.74
IS56	I encourage others to broaden their horizons and perspectives.	0.531
IS70	I solve problems by relying on my ability to understand, accept, and overcome paradoxes.	0.558
<i>Dimension: Truth</i>		
IS2	I always expect the worst in life, and that's usually what I get. (R)	0.696
IS18	I don't know how to be myself when I'm interacting with others. (R)	0.762
IS22	My fears guide and control my life. (R)	0.864
IS23	I tend to dwell on the past or worry about the future, rather than living in the present. (R)	0.779
IS26	I feel limited in life by my belief that I have few options available to me. (R)	0.782

Using the 21-item ISIS-R scale in accordance with Kaiser's criterion, which stipulates that an eigenvector must exceed 1, three factors were identified: Transcendence, Consciousness, and Truth. To determine whether the data were suitable for factor analysis, we first examined sampling adequacy. The Kaiser-Meyer-Olkin was .908, which is considered strong. Bartlett's test of

sphericity was also significant, $\chi^2(253) = 24700.00$, $p < .001$, indicating that the correlations among items were sufficient for this kind of analysis. These factors collectively accounted for 58.4% of the total variance. Although initially encouraging, the item loadings did not cluster according to the pre-defined subscales proposed by Amram and Dryer (2008). In other words, what we expected didn't align precisely with what we observed. Only 3 (Transcendence, Consciousness, and Truth) from 5 domains (Transcendence, Consciousness, Truth, Grace, and Meaning) proposed by Amram & Dryer (2008) was highlighted in this study. For example, several items originally intended to measure distinct dimensions, as defined by Amram & Dryer (2008), loaded onto the same factor, indicating overlap in participants' interpretation of these items. However, the three factors largely comprised items like IS2 and IS22, those we flagged earlier for low correlations. Their low correlations may explain their marginal role in a first-order component structure.

4.3. Validity. CFA Results

To validate the structure suggested by the exploratory factor analysis, we conducted a confirmatory factor analysis (CFA) using SmartPLS4 with a separate sample of 174 participants (Figure 1). This step was essential to test whether the refined 21-item version of the ISIS scale holds up when applied to new data. We compared three structural models: a single-factor model, a correlated three-factor model, and a bifactor model. Fit statistics for each are presented in Table 4.

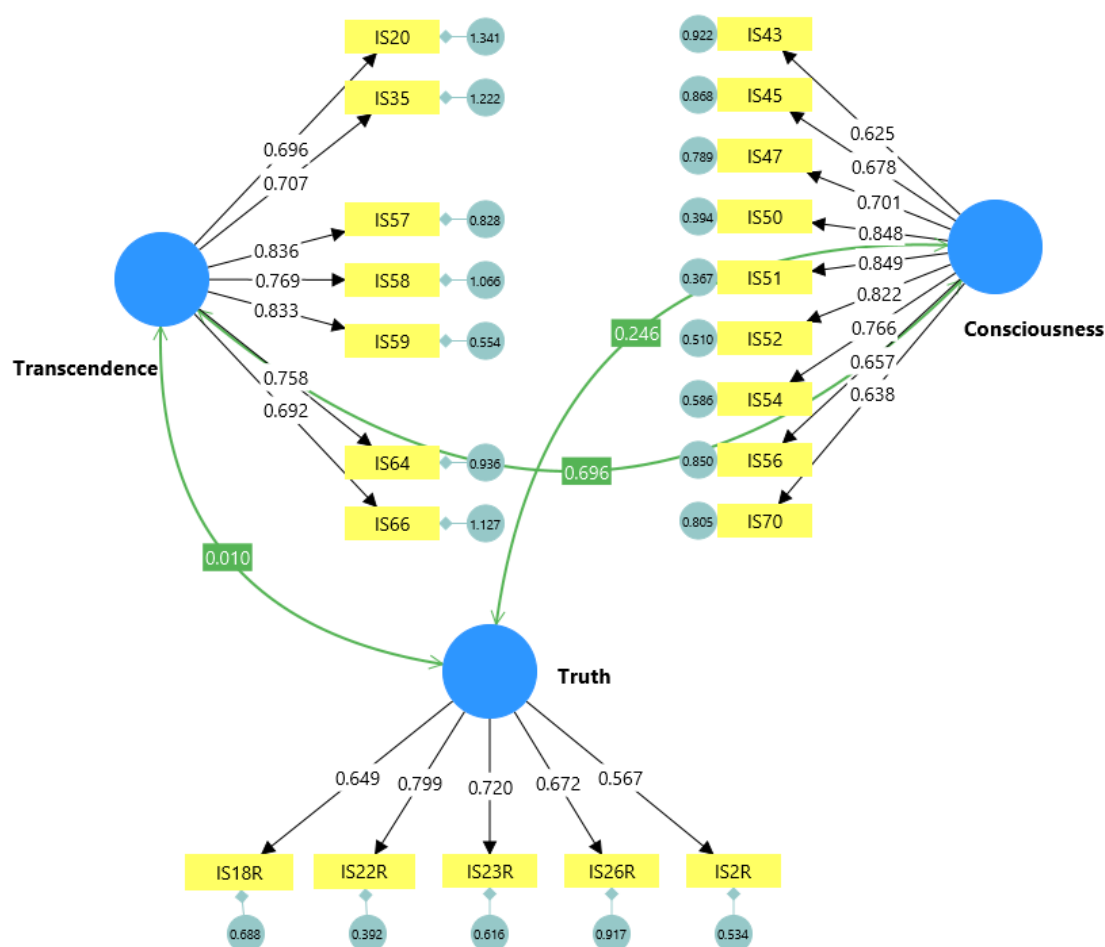


Figure 1. Results of the CFA of the ISIS-21 (N = 174): correlated three-factor model. Latent variables (Transcendence, Truth, Consciousness) are shown as circles and observed items as rectangles. The values on the item arrows are factor loadings (λ), and the green curved paths are correlations among the latent factors.

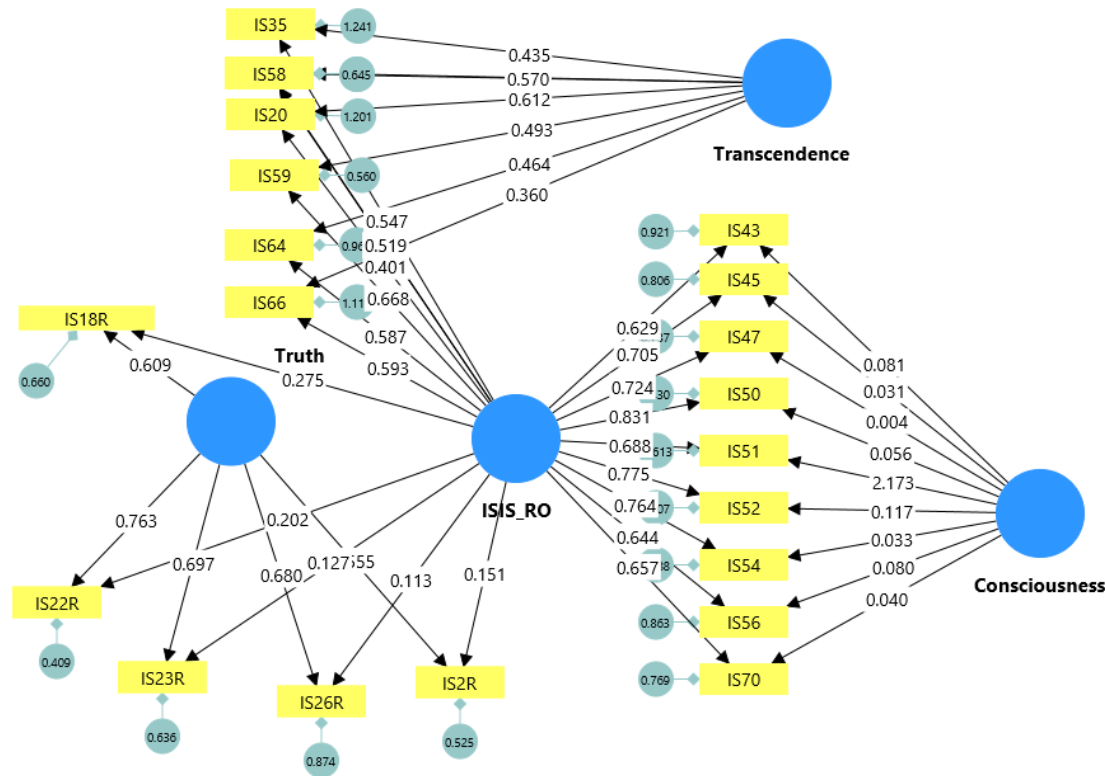


Figure 2. Confirmatory bifactor model of the ISIS-21 ($N = 174$) estimated with CB-SEM. Circles denote latent variables and rectangles observed items. The model specifies one general factor (ISIS_RO) and three group factors (Transcendence, Truth, Consciousness). Numbers on the arrows are standardized outer loadings (λ) on the general and group factors.

The unidimensional model fit poorly: $\chi^2 = 944.372$, $df = 209$, $\chi^2/df = 4.519$, CFI = .655, TLI = .738, RMSEA = .142, SRMR = .124 (Table 4). The correlated three-factor solution (Figure 1) showed an acceptable fit: $\chi^2 = 379.748$, $df = 186$, $\chi^2/df = 2.071$, CFI = .902, TLI = .891, RMSEA = .077, SRMR = .067 (Table 4), with the strongest loadings clustered between .56 and .85 (Figure 1). A bifactor model specification (see Figure 2) improved global indices, $\chi^2 = 300.371$, $df = 168$, $\chi^2/df = 1.79$, CFI = .92, TLI = .918, RMSEA = .067, SRMR = .061 (Table 4), yet the loading pattern was problematic. Several specific loadings for Consciousness were near zero, for example, IS43 = .081, IS45 = .031, IS47 = .004, and IS56 = .117, and a Heywood case appeared for IS51 with a standardised loading of 2.173 (Figure 2, Consciousness factor). General factor loadings were also weak for multiple items, such as IS18R = .275, IS23R = .127, and IS26R = .113 (Figure 2, Truth factor).

Table 4. Goodness-of-fit indices of models: ISIS-21 ($N = 174$)

Model	N	χ^2 (Chi-square)	Df (degrees of freedom)	χ^2/df	CFI	TLI	RMSEA	SRMR
Single-factor model	21	944.4	209	4.5	.65	.74	.142	.124
Three-factor model (correlated) ^a	21	379.748	186	2.1	.90	.89	.077	.067
Bifactor model	21	300.371	168	1.8	.93	.92	.067	.061

Notes: N = number of items; df = degrees of freedom; CFI = comparative fit index; TLI= Tucker-Lewis Index; RMSEA = root mean square error of approximation; SRMR = standardised root mean residual; ^a The final research model.

These estimation issues argue against the bifactor solution. Considering fit, parsimony, and parameter interpretability, the correlated three-factor structure was retained for inference. Bayesian estimation converged, and posterior predictive checks indicated a good fit. Credible intervals for

primary loadings excluded zero, and factor correlations matched the frequentist estimates. Spectral diagnostics supported three dominant dimensions, as the stable three-cluster structure was recovered across bootstrap resamples.

4.5. Measurement Invariance Results

The ISIS-21 three-factor correlated CFA model was tested for measurement invariance across groups. This was examined using multi-group CFA across gender, residence and professional domain, using the usual decision rules, $\Delta CFI \leq .01$ and $\Delta RMSEA \leq .015$, with chi-square differences treated as auxiliary given their sensitivity to unbalanced groups (Table 5). The configural models fit well in all comparisons, CFI around .92 and RMSEA approximately .05, which indicates the same factorial structure across groups.

Table 5. Measurement invariance of ISIS-21: correlated three-factor model ($N = 174$)

Socio-demographic variable

		Degrees of freedom	Df difference	Chi-square	Chisqr difference	P value	AIC	BIC	CFI	CFI difference	RMSEA	RMSEA difference
Gender	M1 configural	372	372	722.544	722.544	0.000	986.544	1492.739	0.920	0.920	0.052	0.052
	M2 weak	390	18	756.142	33.598	0.014	984.142	1421.310	0.916	-0.004	0.052	0.000
	M3 strong	408	18	774.435	18.293	0.436	966.435	1334.577	0.916	0.000	0.051	-0.001
	M4 strict	429	21	848.976	74.541	0.000	998.976	1286.587	0.904	-0.012	0.054	0.002
	M4B strict + means	432	3	851.571	2.595	0.458	995.571	1271.677	0.904	0.000	0.053	0.000
Residence	M1 configural	372	372	710.057	710.057	0.000	974.057	1480.252	0.922	0.922	0.052	0.052
	M2 weak	390	18	747.822	37.765	0.004	975.822	1412.990	0.917	-0.005	0.052	0.000
	M3 strong	408	18	772.198	24.376	0.143	964.198	1332.340	0.916	-0.001	0.051	-0.001
	M4 strict	429	21	814.347	42.149	0.004	964.347	1251.958	0.911	-0.005	0.051	0.000
	M4B strict + means	432	3	816.325	1.978	0.577	960.325	1236.431	0.911	0.000	0.051	0.000
Professional domain	M1 configural	372	372	739.781	739.781	0.000	1003.781	1509.976	0.916	0.916	0.054	0.054
	M2 weak	390	18	762.075	22.294	0.219	990.075	1427.243	0.915	-0.001	0.053	-0.001
	M3 strong	408	18	793.407	31.333	0.026	985.407	1353.549	0.912	-0.003	0.053	0.000
	M4 strict	429	21	861.180	67.773	0.000	1011.180	1298.791	0.901	-0.011	0.054	0.002
	M4B strict + means	432	3	863.412	2.232	0.526	1007.412	1283.519	0.901	0.000	0.054	0.000

By gender, constraining loadings did not compromise model fit ($\Delta CFI = -.004$; $\Delta RMSEA = .000$), and adding intercept constraints also maintained fit ($\Delta CFI = .000$; $\Delta RMSEA = -.001$), supporting both metric and scalar invariance. The strict invariance step was not supported ($\Delta CFI = -.012$; $\Delta RMSEA = .002$), and information criteria increased (AIC: 966.435 $\rightarrow$ 998.976), indicating that equal residual variances across groups are not supported. Equality of latent means on top of strict constraints did not worsen fit, $p = .458$, yet this test is secondary because strict invariance was not established.

By residence, the full sequence of invariance tests was supported ($\Delta CFI = -.005$; $\Delta RMSEA = .000$), scalar invariance was also supported ($\Delta CFI = -.001$; $\Delta RMSEA = -.001$), and strict

invariance remained within acceptable thresholds ($\Delta\text{CFI} = -.005$; $\Delta\text{RMSEA} = .000$). Information criteria improved or remained stable as constraints were added, with AIC decreasing from 974.057 to 964.347 and then to 960.325 when latent means were constrained to equality. The χ^2 difference for the mean equality step was nonsignificant ($p = .577$). This pattern justifies comparisons of both latent means and observed scores between urban and rural respondents.

By professional domain, metric and scalar invariance were supported ($\Delta\text{CFI} = -.001$ and $-.003$; $\Delta\text{RMSEA} = -.001$ and $.000$), but strict invariance was not supported ($\Delta\text{CFI} = -.011$; $\Delta\text{RMSEA} = .002$), with a higher AIC at the strict step (1011.180) compared to the scalar step (985.407). As with gender, imposing equal latent means after a nonretained strict model did not degrade fit ($p = .526$), but the lack of strict invariance advises caution for comparisons based on observed scores.

In summary, the ISIS-21 demonstrates configural, metric, and scalar invariance across gender, residence, and professional domain, while strict invariance is supported only for residence. This supports latent mean comparisons across all three groupings and permits comparisons of observed scores for residence, consistent with recommended practice for invariance testing in applied SEM.

5. Discussion

This study aimed to validate the 21-item Romanian version of the Integrated Spiritual Intelligence Scale (ISIS-21), seeking to preserve the conceptual richness of the original 83-item tool while ensuring psychometric rigour. Using a separate sample of 174 participants, confirmatory factor analysis (CFA) tested three competing models: single-factor, three correlated factors, and bifactor. The correlated three-factor model was identified as the best-fitting structure, demonstrating adequate goodness-of-fit indices and confirming a general latent factor of spiritual intelligence with three domain-specific dimensions: Consciousness, Transcendence, and Truth. In European workplaces, spirituality is often embedded in everyday practices (Maidl et al., 2022), and in Romania, it is frequently expressed through religious traditions rather than solely as private belief systems.

In this particular context, the concept of transcendence is indicative of a communal anchoring and regular reliance on ritual. The concept of consciousness encompasses the notion of embodied attention, which serves to stabilise daily work. Furthermore, the concept of Truth addresses the manner in which fear, rumination, and self-imposed limitations are navigated within a moral framework. Multi-group confirmatory factor analysis (CFA) supported configural, metric, and scalar invariance for gender and the professional domain, and strict invariance for residence, with equality constraints on latent means without deteriorating model fit. These results substantiate latent mean comparisons across all three groupings and provide robust evidence in support of urban–rural contrasts. The pattern aligns with integrative accounts of spiritual intelligence, while elucidating a Romanian occupational profile in which personalised experience and self-reflection are prominent. The Truth domain elucidates the constraining aspects of spiritual life, thus substantiating the utilisation of subscale scores in clinical practice.

Convergence across maximum likelihood, Bayesian, and spectral analyses demonstrates that the ISIS-21 is not dependent on a single estimation approach but forms a stable three-factor structure that holds across groups.

Multi-group tests supported configural, metric, and scalar invariance for gender and professional domain, as well as strict invariance for residence. Therefore, latent mean comparisons are warranted, and urban–rural differences can be interpreted as substantive rather than measurement artefacts. The pattern aligns with integrative accounts of spiritual intelligence proposed by Amram & Dryer (2008), while refining a Romanian occupational profile that emphasises personalised experience and self-reflexivity. The present study posits that the study framework encompasses three interconnected domains: spiritual connection and transcendence, embodied awareness and reflection, as well as internal limitations. These domains are theorised to

interweave cognitive, affective, and behavioural aspects of professional engagement. In practical terms, consciousness has the capacity to guide low-cost routines that protect attention in hybrid schedules. Transcendence has the capacity to sustain community and meaning in dispersed teams. Finally, Truth has the capacity to prompt early support for anxiety and avoidance tendencies before strain accumulates. The Truth dimension elucidates the constraining aspects of spiritual life, thus necessitating the reporting of subscale scores. This approach offers concrete mechanisms for growth and regulation within organisational settings.

Comparing the validated results of the ISIS-21 scale in our Romanian sample with findings from other studies reveals both clear similarities and meaningful differences. These discrepancies can be more meaningfully understood when viewed through a cultural lens. One of the strongest psychometric properties of ISIS has always been its internal consistency. Amram & Dryer (2008) reported a Cronbach's α of .97 for the original 83-item version and values between .84 and .95 for subscales, concluding that the instrument exhibited excellent coherence. However, such high alpha values can sometimes suggest overlapping items or multicollinearity, potentially inflating reliability estimates. In adaptations conducted in Turkey and Iran, Söylemez et al. (2016) reported α values ranging from .89 to .97 in Turkish samples, and Khodadady, Taheryan, & Tavakoli (2012) observed similar results in Iran, thereby reinforcing the scale's cross-cultural robustness. In our Romanian sample, Cronbach's α approached these upper limits but remained slightly lower, which may reflect a more precise internal consistency rather than redundancy.

Other research on ISIS-24 supports the hypothesis of a four-factor model. The model encompasses critical existential thinking (CET), personal meaning production, transcendental awareness, and conscious state expansion. The model demonstrates notable reliability and a satisfactory model fit, thereby providing convergent support for the broader construct of spiritual intelligence (King & DeCicco, 2009). Turning to factor structure, the Persian validation applied exploratory analysis and extracted 21 factors (Khodadady, Kalati, & Tavakoli, 2012), suggesting that the ISIS construct may unfold more richly in specific cultural contexts where spiritual dimensions are deeply nuanced. In our study, however, the bifactor model, comprising one general and two specific factors, proved to be the most effective. This more concise structure preserves the core theoretical dimensions of the ISIS while avoiding the complexity seen in large samples. The contrast likely stems from both cultural expression and sample size, as tightly defined university or religious samples may activate more distinct spiritual subdimensions. In contrast, our broader Romanian employee sample emphasised a unified core and two well-defined domains.

Other quantitative studies, such as those conducted in Turkey (Söylemez & Koç, 2019), have reached parallel conclusions. In some cases, researchers found support for a unidimensional structure, while in others, minor adjustments to a correlated factor structure best accommodated the data. These findings align with ours, underscoring the value of culturally sensitive measurement. Our Romanian results align well with international findings in terms of reliability and factorial flexibility, supporting the idea that while the general construct of spiritual intelligence remains stable, its specific configuration may shift with cultural and sampling context. Local cultural phenomena are often reflected in structural differences. Samples from religious or academic settings may accentuate transcendental awareness. However, our heterogeneous Romanian workforce yielded a parsimonious three-correlated factor structure. This pattern underscores the importance of local replication when instruments are intended for applied organisational use.

The study's findings are also in alignment with recent attempts to reconceptualise workplace intelligence beyond traditional cognitive-emotional paradigms. The integration of existential themes, such as purpose, belonging, and mortality into employee development frameworks is indicative of an evolving conceptualisation of the elements that constitute adaptive professional functioning (Martela et al., 2021).

ISIS-21, through its three correlated domains, captures layers of experience that routine stress or well-being checklists often overlook, linking transcendence, reflexive awareness, and the regulation of inner constraints to how people sustain meaning and agency at work (Maidl et al.,

2022; Martela et al., 2021). The Romanian validation supports its use as a reliable and culturally sensitive tool for organisational development. Because measurement invariance was established at least to the scalar level by gender and professional domain, and strictly by residence, interpretations are comparable across groups, which is the recommended standard for fair subgroup comparisons in applied SEM (Cheung & Rensvold, 2002). It is asserted that higher consciousness can serve as a guide during structured handover procedures, thereby ensuring the preservation of attention within the context of hybrid scheduling methodologies. Transcendence has the capacity to inform the establishment of peer-support groups or brief closure rituals at project milestones. It has been demonstrated that the Truth domain can prompt brief cognitive reframing or mentoring before worry escalates into stress. In this form, ISIS-21 serves less as an abstract doctrine and more as a practical map that organisations can use to target support where it is most likely to help.

The notion of transcendence can be utilised to facilitate the design of community anchors that serve to sustain meaning. Advancements in Truth have the potential to identify the necessity for minimal interventions that address concerns such as worry and self-doubt. These supports may include cognitive reframing, micro-sessions, and mentoring for challenging tasks. Given the invariance observed at the scalar level across gender and professional domain, as well as across residence, these comparisons can be used to allocate resources across subgroups without the need for recalibrating the measure.

In sum, the corroborated three-factor configuration and exhibited invariance of the Romanian ISIS-21 instrument substantiate its credibility and cultural sensitivity. This instrument is considered a reliable resource for facilitating equitable and pragmatic assistance within everyday organisational contexts.

6. Limitation and Future Research Directions

The primary constraint of the present study is the limited sample size and composition utilised during the exploratory and confirmatory phases. The sample size of fewer than 200 participants per analysis falls below the more conservative guidelines for robust factor analysis, particularly when dealing with a multidimensional construct like spiritual intelligence. While some researchers argue that high communalities and strong factor loadings can offset smaller samples, this remains a methodological compromise. The findings here should be interpreted as promising but also preliminary. A second issue involves generalisability. The participants were not drawn from a nationally representative pool, nor were they balanced across variables such as profession, region, or religious background. Spiritual intelligence, by its nature, is likely shaped by life experience, worldview, and cultural norms. Without testing the scale across a more diverse set of respondents, it is difficult to ascertain whether the observed factor structure would hold up in other groups. Additionally, the study's cross-sectional design limits any claims about stability over time or causality.

For instance, it remains unanswered whether heightened spiritual intelligence fosters enhanced well-being or whether the converse is true. Additionally, the ability to observe the evolution of these dimensions across life transitions, such as entering the workforce or experiencing personal loss, remains limited. Ultimately, the study is predicated exclusively on self-reported data. While suitable for constructs that are inherently introspective, such as spiritual intelligence, self-reports are vulnerable to bias, including social desirability bias or overestimation of one's reflective capacity. In subsequent studies, incorporating observational data or peer assessments could potentially enhance the rigour and credibility of the findings. Furthermore, the male subsample is limited in size, which diminishes the precision of male-specific estimates. Consequently, conclusions derived for men should be interpreted with caution. It is imperative to exercise discernment in interpreting these findings and to consider the necessity for subsequent, more comprehensive investigations. The researchers emphasise the necessity of expanding this research with broader, more diverse, and longitudinal data to achieve a comprehensive understanding of what ISIS-21 captures and how it operates in real-world contexts. The validation

of ISIS-21 presents a significant opportunity for exploration in applied settings. With regard to the growing awareness of spiritual intelligence within educational and organisational settings, this concise instrument offers a reliable and efficient method for evaluating capacities related to resilience, ethical reasoning, and meaning-making.

These findings are particularly relevant to educational psychology, where spiritual competencies such as mindfulness, integration of paradox, and existential clarity are associated with teacher effectiveness and student well-being. Moreover, this structure could inform interventions that foster spiritual growth, particularly in educational leadership, counselling, or trauma recovery programmes. The correlated three-factor model supports both global assessments and domain-specific diagnostics, allowing for personalised development plans.

In the future, there are a few ways to extend this work. An important next step is to examine whether ISIS-21 scores can predict dependent variables of particular interest, such as leadership effectiveness, burnout resilience, or more profound existential well-being. Investigating how this tool operates in different cultural groups, particularly in various European populations, may help refine its international applications. To conclude, blending the scale with qualitative methods, such as narrative interviews or reflective journals, might provide a richer portrait of how spiritual intelligence develops in everyday life, transcending the digits to capture its lived expression. Future research should continue to refine and apply this measure across cultures, professions, and life stages to explore the evolving terrain of spiritual intelligence at work.

7. Conclusions

This study examined the construct validity of the Integrated Spiritual Intelligence Scale (ISIS-21) within a sample of Romanian employees, contributing to the growing body of evidence supporting the role of spiritual intelligence in workplace settings. The analysis confirmed a multidimensional structure composed of three coherent factors: spiritual connection and transcendent values, sensory awareness and reflective perception, as well as self-imposed constraints and existential concerns. Each of these aspects captures a different, yet complementary dimension of how individuals navigate existential meaning, relational depth, and inner balance in their professional lives.

The ISIS-21 exhibited a coherent three-factor structure among Romanian employees, with Consciousness, Transcendence, and Truth capturing complementary facets of spiritual functioning in the workplace. The three-factor correlated model was retained on statistical and substantive grounds, while the bifactor alternative was rejected due to unacceptable estimates and weak specific loadings. Multigroup analyses confirmed configural, metric, and scalar invariance across gender and professional domain, as well as strict invariance across residence. This supports latent mean comparisons across these groups according to the established ΔCFI and $\Delta RMSEA$ guidelines.

These results have implications beyond statistical model fit. In European organisations, spirituality is often integrated into everyday practices. In Romania, it is often expressed through communal and ritualistic activities. In this context, the three subscales correspond to specific behaviours that promote meaning at work, such as reflective attention that maintains focus, shared practices that strengthen teamwork, and the management of internal constraints that can otherwise cause stress. This interpretation aligns with evidence linking spiritually framed practices to well-being and commitment, with research demonstrating that autonomy and prosocial behaviour foster meaningful work.

However, limitations remain. The self-report format and nonprobability sample constrain generalisation. Male-specific estimates are less precise, despite scalar invariance by gender. Future work should test the predictive validity of outcomes such as burnout and leadership, examine longitudinal changes, and replicate the study across European contexts using the same invariance standards to ensure comparability.

These findings are meaningful not only from a psychometric perspective but also for what they reveal about the lived experience of employees in contemporary organisational contexts. The

validated structure speaks to how Romanian professionals draw on spiritual frameworks to interpret challenges, foster resilience, and cultivate a sense of personal coherence. While much of the research on workplace wellbeing tends to focus on cognitive, emotional, or behavioural competencies, this study highlights a less frequently examined but crucial layer: the capacity to connect to deeper sources of meaning and guidance.

References

- Amram, Y. (2007). The seven dimensions of spiritual intelligence: An ecumenical, grounded theory [Doctoral dissertation, Institute of Transpersonal Psychology]. *Institute of Transpersonal Psychology*.
- Amram, Y., & Dryer, C. (2008). The integrated spiritual intelligence scale (ISIS): Development and preliminary validation. In *116th Annual Conference of the American Psychological Association*. <http://www.yosiamram.net/papers>
- Atroszko, P., Skrzypińska, K., & Balcerowska, J. (2021). Is there a general factor of spiritual intelligence? Factorial validity of the Polish adaptation of spiritual intelligence self-report inventory. *Journal of Religion and Health*, 60(6), 3591–3605. <https://doi.org/10.1007/s10943-021-01350-2>
- Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin*, 56(2), 81–105. <https://doi.org/10.1037/h0046016>
- Cheung, G. W., & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling: A Multidisciplinary Journal*, 9(2), 233–255. https://doi.org/10.1207/S15328007SEM0902_5
- Costello, A. B., & Osborne, J. (2005). Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical Assessment, Research & Evaluation*, 10(7), 1–9. <https://doi.org/10.7275/jyj1-4868>
- Datta, S. (2022). The influence of spiritual intelligence to promote ethical behaviour in the organizations. *Asian Journal of Management*. <https://doi.org/10.52711/2321-5763.2022.00045>
- Emmons, R. A. (2000a). Is spirituality an intelligence? Motivation, cognition, and the psychology of ultimate concern. *The International Journal for the Psychology of Religion*, 10(1), 3–26. https://doi.org/10.1207/S15327582IJPR1001_2
- Emmons, R. A. (2000b). Spirituality and intelligence: Problems and prospects. *The International Journal for the Psychology of Religion*, 10(1), 57–64. https://doi.org/10.1207/S15327582IJPR1001_6
- Eysenck, M. W., & Keane, M. T. (2020). Cognitive psychology: A student's handbook. *Psychology Press*. <https://doi.org/10.4324/978135105851>
- Gardner, H. (2004). Frames of mind: The theory of multiple intelligences. *Basic Books*.
- Gog, S. (2020). Neo-liberal subjectivities and the emergence of spiritual entrepreneurship: An analysis of spiritual development programs in contemporary Romania. *Social Compass*, 67(1), 103–119. <https://doi.org/10.1177/0037768619895168>
- Golino, H., & Demetriou, A. (2017). Estimating the dimensionality of intelligence-like data using exploratory graph analysis. *Intelligence*, 62, 54–70. <https://doi.org/10.1016/j.intell.2017.02.007>
- Guette, A., & Vandenbempt, K. (2016). Learning in times of dynamic complexity through balancing phenomenal qualities of sensemaking. *Management Learning*, 47(1), 83–99. <https://doi.org/10.1177/1350507615592112>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). Multivariate data analysis. *Cengage*. <https://books.google.com.tr/books?id=0R9ZswEACAAJ>
- Hair Jr, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM). *European Business Review*, 26(2), 106–121. <https://doi.org/10.1108/EBR-10-2013-0128>

- Jos, S., & Pandey, N. (2022). Influence of spiritual intelligence on happiness and well-being: A review. *Mind and Society*. <https://doi.org/10.56011/mind-mri-112-202214>
- Khodadady, E., Taheryan, A., & Tavakoli, A. (2012). Validating the Persian integrated spiritual intelligence scale within an Islamic context. *Ilahiyat Studies*, 3(2), 247-274. <https://doi.org/10.12730/13091719.2012.32.61>
- King, D. B., & DeCicco, T. L. (2009). A viable model and self-report measure of spiritual intelligence. *International Journal of Transpersonal Studies*, 28(1), 68–85. <https://doi.org/10.24972/ijts.2009.28.1.68>
- Kline, R. B. (2016). Principles and practice of structural equation modeling. Guilford Press.
- Konold, T. R., & Sanders, E. A. (2024). The SEM reliability paradox in a Bayesian framework. *Structural Equation Modeling: A Multidisciplinary Journal*, 31(1), 97–117. <https://doi.org/10.1080/10705511.2023.2220915>
- Li, G., & Hu, J. (2025). The impact of spiritual leadership on employee resilience: A self-concept theory perspective. *Human Resource Management Journal*. Advance online publication. <https://doi.org/10.1111/1748-8583.12604>
- MacCallum, R. C., Widaman, K. F., Preacher, K. J., & Hong, S. (2001). Sample size in factor analysis: The role of model error. *Multivariate Behavioral Research*, 36(4), 611–637. https://doi.org/10.1207/s15327906mbr3604_06
- MacCallum, R. C., Widaman, K. F., Zhang, S., & Hong, S. (1999). Sample size in factor analysis. *Psychological Methods*, 4(1), 84–99. <https://doi.org/10.1037/1082-989X.4.1.84>
- Mahmood, A., Arshad, M. A., Ahmed, A., Akhtar, S., & Khan, S. (2018). Spiritual intelligence research within human resource development: A thematic review. *Management Research Review*, 41(8), 837–861. <https://doi.org/10.1108/MRR-03-2017-0073>
- Maidl, L., Seemann, A.-K., Frick, E., Gündel, H., & Paal, P. (2022). Leveraging spirituality and religion in European for-profit organizations: A systematic review. *Humanistic Management Journal*, 7(1), 23–53. <https://doi.org/10.1007/s41463-021-00110-4>
- Martela, F., Gomez, M., Unanue, W., Araya, S., Bravo, D., & Espejo, A. (2021). What makes work meaningful? Longitudinal evidence for the importance of autonomy and beneficence for meaningful work. *Journal of Vocational Behavior*, 131, 103631. <https://doi.org/10.1016/j.jvb.2021.103631>
- Nunes, R., Pinto, S., Guedes, L., & Pinto, C. (2024). Spiritual intelligence: A scoping review on the gateway to mental health. *Global Health Action*, 17(1), 2362310. <https://doi.org/10.1080/16549716.2024.2362310>
- Putnick, D. L., & Bornstein, M. H. (2016). Measurement invariance conventions and reporting: The state of the art and future directions for psychological research. *Developmental Review*, 41, 71–90. <https://doi.org/10.1016/j.dr.2016.06.004>
- Shanmughom, V., Jeevapriya, T., & Anbazhagan, B. (2024). Exploring spiritual intelligence and its influence on IT sector employee performance. *International Journal for Multidisciplinary Research*, 6(4). <https://doi.org/10.36948/ijfmr.2024.v06i04.26950>
- Siswanti, D. N., Khairuddin, R., & Halim, F. (2021). The influence of spiritual intelligence on leadership competency in the scope of government institutions. *Indonesian Journal of Learning Education and Counseling*, 3(2), 243–255. <https://doi.org/10.31960/ijolec.v3i2.960>
- Söylemez, A., & Koç, M. (2019). Studying spiritual intelligence as a predictor on meaningfulness and life satisfaction. *Spiritual Psychology and Counseling*, 4(2), 109–122. <https://doi.org/10.12738/spc.2019.4.2.0060>
- Söylemez, A., Koç, M., & Söylemez, B. (2016). The adaptation of integrated spiritual intelligence scale into Turkish. *Journal of Educational and Instructional Studies in the World*, 6(1), 18–24.
- van de Schoot, R., Winter, S. D., Ryan, O., Zondervan-Zwijnenburg, M., & Depaoli, S. (2017). A systematic review of Bayesian articles in psychology: The last 25 years. *Psychological Methods*, 22(2), 217–239. <https://doi.org/10.1037/met0000100>