

Psychometric validation of the I-PC-5 index of psychological culture

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Abstract. The relevance of the study is determined by the need for a valid and reliable instrument for assessing psychological culture as an integrative personal and professional resource in under conditions of contemporary social transformations and professional challenges in educational environments. The purpose of the study was the psychometric validation of the complex psychological diagnostic instrument “Index of Psychological Culture of Personality (I-PC-5)”. The study was based on a multidimensional theoretical model of psychological culture and employs confirmatory factor analysis using the weighted least squares estimator with mean and variance adjustment, evaluation of model fit indices (Comparative Fit Index, Tucker-Lewis Index, Root Mean Square Error of Approximation, Standardised Root Mean Square Residual), and assessment of internal consistency using Cronbach’s alpha and McDonald’s omega coefficients. The results demonstrated that the five-factor first-order model shows a satisfactory fit to the empirical data, confirming the theoretical structure of the construct. The second-order hierarchical model also exhibited acceptable fit indices, supporting the presence of a general latent factor representing psychological culture as an integrated personal resource. All factor loadings were statistically significant and indicated a substantial contribution of each component to the overall construct. Internal consistency indicators for all scales exceeded the recommended threshold values (α and $\omega \geq .70$), demonstrating high reliability. In addition, moderate correlations between the factors confirmed their conceptual distinctiveness while supporting the multidimensional structure of the construct. The obtained results indicate that the instrument provides a stable and theoretically grounded measurement of psychological culture. The instrument can be applied in empirical research, monitoring studies, and psychological support programmes for educators and other professional groups.

Keywords: personal psychological resources; multidimensional construct; confirmatory factor analysis; validity; reliability; integral index

Introduction

Contemporary social transformations, including global crises, the consequences of the COVID-19 pandemic, military conflict and increasing professional uncertainty, have intensified the need to maintain psychological resilience and professional well-being among specialists in socio-economic professions. Educational environments are characterised by high emotional demands, intensive interpersonal communication and the necessity for continuous adaptation to rapidly changing professional conditions. Under such circumstances, the development of internal personal resources becomes a critical condition for effective functioning, self-regulation and psychological stability.

Research has increasingly focused on the role of emotional and psychological resources in professional well-being. Based on meta-analytic evidence, Y. Wang *et al.* (2025) investigated the role of emotion regulation strategies in teachers’ well-being and positive emotional outcomes. Their results showed that effective emotion regulation strategies, particularly deep acting, are associated with higher well-being, job satisfaction and positive emotions, whereas surface acting demonstrated mixed and less consistently favourable effects. These findings highlighted the importance of emotional-regulatory competencies as part of broader psychological resources in educational professions. H. Zacher

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& C.W. Rudolph (2021) investigated changes in subjective well-being during the COVID-19 pandemic using longitudinal data. Their study showed that well-being is dynamic and significantly influenced by both personal and contextual factors. The authors concluded that adaptive psychological mechanisms are essential for maintaining stability under conditions of global uncertainty. D. García-Álvarez *et al.* (2021) focused on psychological well-being among teachers during and after the COVID-19 pandemic. The researchers demonstrated that positive psychological interventions contribute to improved emotional functioning and reduced stress levels. However, they also noted that the effectiveness of such interventions depends on the availability of internal psychological resources.

Authors such as W.P. Setioningtyas *et al.* (2024) developed the concept of psychological capital as a higher-order construct integrating hope, efficacy, resilience and optimism. Their research showed that this integrative resource significantly influences performance and professional adaptation. These findings supported the idea that psychological functioning should be analysed within a multidimensional framework. C. Maslach & M.P. Leiter (2022) conceptualised burnout as a systemic phenomenon resulting from the interaction between the individual and the work environment. The authors emphasised that professional well-being cannot be explained solely by external conditions and must include internal psychological factors. This perspective highlights the importance of studying integrated personal resources. T. Lomas *et al.* (2021) proposed a multidimensional model of well-being within the framework of third-wave positive psychology. Their approach integrates cognitive, emotional and value-based aspects of human functioning. The authors argue that psychological phenomena should be understood as complex systems rather than isolated variables.

H.W. Marsh *et al.* (2020) examined modern approaches to modelling complex psychological constructs using confirmatory factor analysis and related techniques. The authors demonstrated the importance of balancing model fit and parsimony when testing theoretical models. These methodological principles are essential for validating multidimensional constructs. J. Laboy Rodríguez (2025). further developed this line of research by analysing bifactor and hierarchical models in psychological measurement. Their findings showed that such models allow for the simultaneous representation of general and specific factors. This approach provides a more accurate understanding of complex psychological constructs. Despite the growing interest in psychological resources, many empirical studies continue to focus on isolated variables rather than integrative multidimensional constructs. Such an approach limits the understanding of how different psychological characteristics interact within a unified system. Consequently, there is a clear need for the

development of comprehensive diagnostic tools capable of capturing psychological culture as an integrated personal resource. Therefore, the purpose of this study was the psychometric validation of the complex psychological diagnostic instrument “Index of Psychological Culture of Personality (I-PC-5)”, including the examination of its factor structure, internal consistency and model fit within a hierarchical framework.

Materials and Methods

The diagnostic method “Index of Psychological Culture of Personality (I-PC-5)” was developed between 2023 and February 2026 within the framework of applied scientific research conducted at the Ivan Ziaziun Institute of Pedagogical and Adult Education of the National Academy of Educational Sciences of Ukraine. The development of the instrument was carried out in accordance with the official research programme “Psychological support of professional activity of pedagogical staff in conditions of global changes” (National Academy of Educational Sciences of Ukraine, 2025), approved by the decision of the Academic Council of the Institute, as well as within the subsequent research project “Development of psychological culture of pedagogical and academic staff” based on the technical assignment and research contract (2026-2027) (National Academy of Educational Sciences of Ukraine, 2026).

The development of the I-PC-5 was based on a combination of scientific sources, normative and methodological documents, and empirical materials. Scientific publications in the fields of personality psychology, emotional regulation and professional well-being were used to define the conceptual structure of psychological culture and to identify its core components. Normative documents, including the technical assignment of the research project and institutional research regulations, were used to ensure methodological consistency, applied relevance and compliance with national research standards (Diener *et al.*, 2018; Pavlyk, 2025; Ihnatovych *et al.*, 2025).

The instrument was developed in several stages. At the first stage, a theoretical analysis and content analysis of the concept of psychological culture were conducted on the basis of scientific sources and research documentation. At the second stage, the structure of the construct was operationalised and an item pool was developed, reflecting cognitive, emotional-regulatory, reflective, value-semantic and communicative components. At the third stage, expert evaluation of the items was conducted to assess their content validity and correspondence to the theoretical model. The panel of experts consisted of 7 specialists in psychology, including researchers and academic staff members with experience in personality psychology, psychodiagnostics and educational psychology (professional experience ranging from 10 to 25 years). The experts independently evaluated each item according to the following

criteria: relevance to the construct of psychological culture, clarity of formulation, content validity and correspondence to the respective component of the model. A four-point rating scale was used (1 = not relevant, 4 = highly relevant). Based on the obtained ratings, the content validity index (CVI) was calculated for each item. Items with low expert agreement were revised or excluded from the final version of the questionnaire. At the fourth stage, a pilot study was conducted in order to refine item formulation and to assess the clarity and relevance of the questionnaire. The pilot sample included 52 respondents representing educational professionals. Based on the pilot results, minor adjustments were made to item wording. At the fifth stage, the main empirical study was conducted, and data were collected for psychometric validation of the instrument.

The primary materials used in the study included the I-PC-5 questionnaire as the main diagnostic tool, empirical data obtained from respondents, and standardised survey materials used for data collection and processing. The empirical dataset served as the basis for testing the factor structure of the instrument and assessing its reliability. Statistical analysis was conducted using structural equation modelling techniques. Confirmatory factor analysis was applied to evaluate the correspondence between the theoretical model and the empirical data. Polychoric correlation matrices and the WLSMV estimator were used due to the ordinal nature of the data. Model fit indices, including the Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardised Root Mean Square Residual (SRMR), were used to assess model adequacy, and reliability was evaluated using Cronbach's alpha and McDonald's omega coefficients.

The theoretical model assumes that the five components form a higher-order latent construct representing psychological culture as an integral personal resource. The empirical study involved $N = 742$ respondents representing teachers and academic staff members of institutions of formal and non-formal education. Participation in the study was voluntary and anonymous. The data were collected during the period 2023-2026 within the framework of research projects approved by the Academic Council of the Ivan Ziaziun Institute of Pedagogical and Adult Education of the National Academy of Educational Sciences of Ukraine, in accordance with institutional research agreements.

Participants were recruited on a voluntary basis and selected through institutional collaboration within ongoing research programmes. The mean age of participants was $M = 41.8$ years ($SD = 9.6$). Professional experience ranged from 1 to 38 years ($M = 16.4$; $SD = 8.7$). Women constituted 78.3% of the sample and men 21.7%, reflecting the gender distribution typical of educational professions. Participants represented different types of educational institutions, including secondary

schools, higher education institutions and adult education centres, which provided a diverse empirical base for testing the psychometric properties of the instrument. Data collection was conducted using both online and offline formats. The online survey was distributed via institutional communication channels, while the paper-based version was administered directly in educational institutions. This combined approach ensured broader accessibility and increased participation.

Respondents were asked to evaluate statements describing their attitudes, emotional responses and behavioural tendencies in professional and everyday contexts over the previous one to two months. The questionnaire included 70 items covering cognitive, emotional-regulatory, reflective, value-semantic and communicative components of psychological culture. Examples of items include: "I understand how emotions influence decision-making and behaviour", "I am able to regulate my emotional state in stressful situations", "I regularly reflect on my professional actions", and "I maintain respectful and constructive interaction with others". Responses were provided using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The study was conducted in accordance with the Code of Ethics of the National Psychological Association of Ukraine (National Psychological Association of Ukraine, 2021). Participation was voluntary, and informed consent was obtained from all respondents prior to data collection. Anonymity and confidentiality of the data were ensured at all stages of the research.

Results and Discussion

The analysis of internal consistency demonstrated that all scales of the I-PC-5 instrument possess a high level of reliability, which represents one of the key findings of the study. Cronbach's alpha values ranged from .83 to .88, while McDonald's omega coefficients ranged from .84 to .89, consistently exceeding the recommended threshold of .70. This indicates that the items within each scale form internally consistent constructs and reliably measure the intended components of psychological culture. A particularly important result is the high reliability of the integral index ($\alpha = .93$; $\omega = .94$), which confirms that the overall score of the instrument can be interpreted as a stable indicator of psychological culture. This finding supports the use of both composite and profile-based interpretations of the instrument.

Descriptive statistics provide additional insight into the structure of psychological culture across the sample. The value-semantic component demonstrated the highest mean score ($M = 4.12$), indicating a strong orientation towards values, meaning and ethical responsibility among respondents. This result may reflect the specificity of the professional group under study, as educational professionals are typically engaged in value-based interaction and are required to maintain a

high level of moral and professional responsibility. In contrast, the emotional-regulatory component showed the lowest mean value ($M = 3.74$), suggesting that emotional self-regulation represents a comparatively more vulnerable aspect of psychological functioning. Given the high emotional demands and stress associated with educational professions, this result may indicate a relative deficit in coping strategies and emotional resilience. A comparison across types of educational institutions showed that respondents working in higher and postgraduate education tend to demonstrate relatively

higher scores on cognitive and reflective components, whereas representatives of general secondary and vocational education more often show higher communicative indicators. This pattern may reflect differences in professional roles and the nature of pedagogical interaction. Differences between groups also suggest that value-semantic indicators remain consistently high across all types of institutions, confirming their stability as a core component of psychological culture in educational professions. Internal consistency indicators and descriptive statistics are presented in Table 1.

Table 1. Internal consistency indicators of the I-PC-5 scales

Scale	Number of Items	Cronbach's α	McDonald's ω	Mean (M)	SD
Cognitive	14	.84	.85	3.87	0.61
Emotional-regulatory	14	.88	.89	3.74	0.67
Reflective	14	.83	.84	3.91	0.58
Value-semantic	14	.86	.87	4.12	0.52
Communicative	14	.85	.86	3.95	0.59
Integral I-PC-5 Index	70	.93	.94	3.92	0.48

Source: authors' own calculations

Confirmatory factor analysis provided substantial empirical support for the hypothesised structure of the instrument and represents one of the central results of the study. The five-factor first-order model demonstrated a satisfactory level of fit to the empirical data, indicating that the proposed structure adequately reflects the relationships between observed variables and latent constructs. The obtained values of incremental fit indices ($CFI = .932$; $TLI = .928$) exceed the recommended threshold of .90, which suggests that the specified model provides a significantly better representation of the data compared to a null model. This indicates that the allocation of items to their respective factors is theoretically justified and empirically supported.

At the same time, the absolute fit indices further confirm the adequacy of the model. The RMSEA value (.041), which is below the more stringent criterion of .05, indicates a close fit of the model to the data rather

than merely an acceptable one. The narrow confidence interval for RMSEA ([.039; .043]) suggests stability of the estimated parameters and robustness of the model across possible samples. The SRMR value (.052), being well below the threshold of .08, indicates that the residual differences between observed and model-implied correlations are minimal. This provides additional evidence that the model reproduces the empirical covariance structure with a high degree of accuracy. Taken together, these indicators demonstrate that the five-factor structure of psychological culture is not only theoretically grounded but also empirically well-supported. Importantly, the combination of high incremental and low residual-based indices suggests that the model achieves both explanatory power and parsimony, which is considered a key criterion in structural modelling. Detailed goodness-of-fit indices for the first-order CFA model are presented in Table 2.

Table 2. Model fit indices for the first-order CFA model

Indicator	Value	Acceptable Threshold
χ^2 (df = 2205)	4,126.37	-
CFI	.932	$\geq .90$
TLI	.928	$\geq .90$
RMSEA	.041	$\leq .08$
90% CI RMSEA	[.039; .043]	-
SRMR	.052	$\leq .08$

Source: authors' own calculations

From a substantive perspective, the obtained model fit indicates that psychological culture can be interpreted as a structured system of interrelated but distinct components. The differentiation of factors confirms that cognitive, emotional-regulatory, reflective, value-semantic and communicative dimensions represent

specific aspects of psychological functioning rather than interchangeable traits. The stability of the model across a heterogeneous sample suggests that this structure is preserved across different types of educational institutions. Further testing of the second-order hierarchical model provided additional and conceptually important

evidence in support of the proposed structure of the instrument. The model demonstrated a good level of fit to the empirical data, indicating that the relationships among the five primary factors can be meaningfully explained through a higher-order latent construct.

The obtained goodness-of-fit indices confirm the adequacy of the hierarchical specification. In particular, the values of the Comparative Fit Index (CFI = .929) and Tucker-Lewis Index (TLI = .925) exceeded the recommended threshold of .90, indicating that the hierarchical model retains substantial explanatory power in comparison with a null model. At the same time, the values of the Root Mean Square Error of Approximation (RMSEA = .042) and the Standardised Root Mean Square Residual (SRMR = .055) remained well within acceptable limits, suggesting that the discrepancies between the observed data and the model-implied structure are minimal.

Importantly, the fit indices of the second-order model are only marginally lower than those of the first-order model, which represents a key analytical result. This indicates that the introduction of a higher-order latent factor does not substantially reduce model adequacy. In psychometric terms, this supports the parsimony of the hierarchical model, as it allows the complex structure of psychological culture to be

represented at a more general level without a significant loss of explanatory precision. From a theoretical perspective, these findings provide strong support for the assumption that the five primary components of psychological culture are not independent constructs but systematically interrelated dimensions. Their organisation within a higher-order latent factor suggests the presence of a common underlying psychological basis that integrates cognitive, emotional-regulatory, reflective, value-semantic and communicative characteristics of personality.

Thus, psychological culture may be interpreted as an integrated personal resource rather than a simple aggregation of separate traits. The hierarchical structure of the model reflects the dual nature of the construct, combining differentiation at the level of specific components with integration at the level of a general latent factor. This duality is particularly important for both theoretical interpretation and practical application, as it allows the instrument to be used for assessing both the overall level of psychological culture and the specific profiles of its components. Overall, the results of the second-order CFA confirm the structural coherence of the construct and strengthen the validity of the proposed model. Detailed model fit indices for the second-order CFA model are presented in Table 3.

Table 3. Model fit indices for the second-order CFA model

Indicator	Value
χ^2 (df = 2210)	4184.92
CFI	.929
TLI	.925
RMSEA	.042
90% CI RMSEA	[.040; .044]
SRMR	.055

Source: authors' own calculations

Standardised factor loadings of the primary components on the higher-order latent construct ranged from .72 to .84, indicating strong and practically meaningful associations between each component and the overall construct of psychological culture. These values substantially exceed the commonly accepted threshold for salient factor loadings ($\geq .50$), which suggests that all components make a significant contribution to the formation of the integral latent factor. All estimated coefficients were statistically significant ($p < .001$), confirming the robustness and stability of the relationships between the first-order factors and the higher-order construct. This result provides empirical evidence that the observed associations are not random and can be generalised beyond the sample.

A more detailed analysis of the factor loadings allows for a deeper interpretation of the internal structure of psychological culture. The highest loading was observed for the emotional-regulatory component (.84), indicating that the ability to manage emotional

states plays a particularly central role in the organisation of psychological culture as an integrated personal resource. This result may be explained by the functional significance of emotional regulation as a core mechanism that supports the coordination of other psychological processes. In particular, effective emotional regulation contributes to maintaining cognitive clarity, facilitates reflective analysis of one's experiences, and enables constructive interpersonal interaction. In the context of professional activity in educational settings, emotional-regulatory competencies are especially important due to the high intensity of interpersonal communication, emotional demands and stress-related factors. The ability to manage emotional reactions allows individuals to maintain professional stability, regulate behaviour in complex situations and sustain value-based interaction with others. Therefore, emotional regulation may serve as an integrative component that connects cognitive, reflective and communicative aspects of psychological culture. From a

structural perspective, the relatively higher loading of this component suggests that variability in emotional-regulatory abilities accounts for a substantial proportion of variance in the overall construct. This may indicate that emotional self-regulation functions as a key organising factor within psychological culture, reflecting its role as a dynamic mechanism that ensures the coherence and adaptive functioning of the system as a whole. This suggests that emotional self-regulation may function as a key mechanism linking other components of the construct.

In contrast, the reflective component demonstrated the lowest loading (.72), although it still remains within the range of strong associations. This relatively lower loading may be explained by the more complex and context-dependent nature of reflective processes. Reflection involves the ability to analyse one's own experiences, thoughts and behaviours, which is often influenced by situational factors, individual differences and the level of conscious engagement in self-analysis. Unlike emotional regulation, which is activated in real-time and directly supports behavioural adaptation, reflective processes are more variable and may not be consistently engaged across all situations. In professional contexts, particularly in educational environments, reflection often depends on external conditions such as time availability, organisational culture and opportunities for professional self-development. Moreover, reflection may function as a mediating or supporting mechanism rather than a primary organis-

ing component of psychological culture. It contributes to the integration of experience and the development of self-awareness but may exert its influence indirectly through other components, such as cognitive and emotional-regulatory processes. As a result, its statistical contribution to the higher-order construct may appear relatively lower, while still remaining theoretically significant. This may indicate that reflective processes are more context-dependent and variable across individuals, contributing to the overall construct in a less direct but still substantial manner.

Importantly, the relatively balanced distribution of factor loadings across all components indicates that the structure of psychological culture is not dominated by a single dimension. Instead, the construct demonstrates a high degree of structural equilibrium, in which cognitive, emotional-regulatory, reflective, value-semantic and communicative components contribute in a complementary manner. This finding supports the theoretical assumption of the multidimensional and integrative nature of psychological culture. Thus, the obtained factor loadings confirm that the proposed structural model simultaneously captures both the differentiation of components and their integration within a unified latent construct. This dual characteristic is essential for the interpretation of psychological culture as a complex personal resource that combines multiple aspects of psychological functioning. Detailed factor loadings of the primary components on the higher-order latent factor are presented in Table 4.

Table 4. Standardised factor loadings for the second-order model

Primary factor	Loading on I-PC-5
Cognitive	.78
Emotional-regulatory	.84
Reflective	.72
Value-semantic	.81
Communicative	.76

Note: all coefficients are statistically significant ($p < .001$)

Source: authors' own calculations

The distribution of factor loadings indicates that all components contribute substantially to the overall construct, with no single dimension dominating the structure. At the same time, variations in loadings may reflect differences in the manifestation of psychological culture across professional contexts, particularly between more cognitively oriented and more interaction-focused educational environments. Correlations between the latent factors ranged from $r = .48$ to $r = .67$, indicating moderate and theoretically meaningful associations between the components of psychological culture. These values suggest that the dimensions of the construct are substantially interrelated, reflecting the presence of a common underlying psychological foundation. At the same time, the magnitude of the correlations remains below the threshold that would indicate

excessive overlap between factors. This is an important result, as it demonstrates that the components retain their conceptual distinctiveness and are not redundant. In psychometric terms, this pattern provides evidence of discriminant validity, confirming that each scale captures a specific aspect of psychological culture.

A more detailed examination of the correlation structure reveals that the strongest relationship was observed between the emotional-regulatory and reflective components ($r = .67$), suggesting a close functional connection between emotional self-regulation and processes of self-awareness and reflection. This finding may indicate that the ability to regulate emotional states is closely linked to the capacity for analysing one's own experiences and behavioural strategies. At the lower end of the range, correlations closer to $r \approx .48$ indicate

comparatively weaker, though still meaningful, associations between certain components. This variation in correlation strength reflects the differentiated nature of the construct and suggests that different components contribute to psychological culture in distinct ways.

Overall, the observed pattern of correlations supports the assumption that psychological culture is characterised by both integration and differentiation. The components are sufficiently connected to form a

coherent system, yet sufficiently distinct to represent unique dimensions of psychological functioning. This balance between interrelatedness and independence is a key indicator of a well-structured multidimensional construct. Thus, the correlation analysis confirms that psychological culture can be conceptualised as an integrated but internally differentiated personal resource. Detailed correlations between the latent factors are presented in Table 5.

Table 5. Correlations between latent factors

Factors	r
Cognitive – Emotional-regulatory	.63
Cognitive – Reflective	.58
Emotional-regulatory – Reflective	.67
Value-semantic – Communicative	.61
Reflective – Communicative	.54

Note: correlations ranged from $r = .48$ to $r = .67$

Source: authors' own calculations

The pattern of correlations between factors suggests that the components of psychological culture are interconnected but retain their relative independence. Variability in the strength of correlations may reflect differences in professional roles and institutional contexts, where certain components are more closely linked depending on the nature of pedagogical activity. It should be noted that the use of self-report measures may introduce certain response biases, including social desirability and a tendency towards positive self-evaluation. This is particularly relevant for value-semantic and communicative components, which are closely associated with socially approved forms of behaviour. In the context of educational professions, respondents may be inclined to provide answers that reflect professional norms rather than actual experiences. However, the overall consistency of the results suggests that these effects did not substantially distort the general pattern of findings.

Overall, the obtained results provided strong and consistent empirical support for the theoretical five-component structure of psychological culture and confirm the validity of the proposed hierarchical model. The convergence of evidence from reliability analysis, model fit indices and structural parameters indicates that the construct is both psychometrically sound and theoretically coherent. The findings demonstrated that the primary components are systematically integrated within a higher-order latent factor representing psychological culture as a unified personal resource. Importantly, this hierarchical organisation does not obscure the specificity of individual components but rather reflects their coordinated functioning within a common psychological system. This result is particularly significant, as it confirms that psychological culture can be meaningfully interpreted at both general and component levels.

The psychometric analysis also indicates that the I-PC-5 instrument demonstrates high internal consistency and satisfactory structural validity, which constitutes a key practical outcome of the study. The stability of reliability coefficients and the adequacy of the model fit suggest that the instrument provides a consistent and theoretically grounded measurement of psychological culture across different aspects of the construct. From an applied perspective, these results justify the use of the I-PC-5 in both research and professional contexts. Compared to existing psychodiagnostic instruments that typically assess isolated psychological constructs (e.g., emotional regulation, reflection or values), the I-PC-5 provides an integrated assessment of psychological culture as a multidimensional personal resource. This represents a key advantage of the instrument, as it allows for a comprehensive evaluation of psychological functioning within a unified conceptual framework. The instrument can be effectively used in large-scale empirical studies aimed at monitoring the state and dynamics of psychological culture among educational professionals. In addition, it offers practical opportunities for psychological support and professional development programmes. In particular, the I-PC-5 enables the identification of strengths and potential deficits in specific components (e.g., emotional-regulatory or reflective), which allows for the design of targeted interventions focused on developing emotional resilience, self-reflection and communicative competence. Furthermore, the possibility of analysing both the overall index and the profiles of individual components provides additional analytical flexibility. This allows practitioners not only to assess the general level of psychological culture but also to construct individual or group profiles, which can be used for personalised feedback, counselling and the evaluation of intervention effectiveness over time. Thus, the I-PC-5 may be considered a reliable and

psychometrically robust diagnostic tool for assessing psychological culture. Its validated hierarchical structure enables a comprehensive analysis of the construct as an integrated yet internally differentiated system, making it particularly relevant for monitoring, psychological support and the development of personal and professional resources in contemporary educational environments.

The results of the present study can be interpreted within the framework of contemporary research on psychological resources, psychometric validation and applied psychological assessment. Comparison with recent empirical studies provides a deeper understanding of the structure and functional role of psychological culture. The role of psychological resources in professional functioning has been widely examined in recent studies. D. Bagdžiūnienė *et al.* (2022) investigated the relationship between leadership support, job resources and teacher resilience and demonstrated that psychological resources act as mediating factors in professional adaptation. These findings are consistent with the results of the present study, which conceptualise psychological culture as an integrative personal resource. However, while D. Bagdžiūnienė *et al.* (2022) emphasised external organisational conditions, the present research focuses on the internal structural organisation of psychological resources.

The multidimensional nature of psychological functioning has also been confirmed in research on subjective well-being. E. Diener *et al.* (2018) analysed the structure of well-being and emphasised its complex and multifaceted character, requiring integrative measurement approaches. This corresponds to the findings of the present study, where psychological culture is represented as a system of interrelated components organised within a hierarchical structure. The effectiveness of psychological interventions aimed at improving well-being has been analysed by D. García-Álvarez *et al.* (2021), who demonstrated positive changes in teachers' psychological functioning following intervention programmes. While their study focused on intervention outcomes, the present research contributes by providing a diagnostic tool for identifying the structure of psychological resources underlying such outcomes.

Recent developments in positive psychology also emphasise the multidimensional nature of psychological functioning. T. Lomas *et al.* (2021) proposed a model of well-being integrating cognitive, emotional and value-based components. This perspective is consistent with the structure of psychological culture identified in the present study. The concept of psychological capital developed by W.P. Setioningtyas *et al.* (2024) further supported the interpretation of psychological resources as higher-order constructs. The present findings are consistent with this approach, although the I-PC-5 model incorporates a broader range of components, including reflective and communicative aspects. The problem

of professional burnout has been conceptualised by C. Maslach & M.P. Leiter (2022) as a mismatch between the individual and the work environment. The present study complements this perspective by suggesting that internal psychological structures, such as psychological culture, may mediate this relationship.

From a methodological perspective, the results correspond to contemporary psychometric standards. H.W. Marsh *et al.* (2020) emphasised the importance of balancing model fit and parsimony when applying confirmatory factor analysis, which is supported by the satisfactory fit indices obtained in this study. J. Laboy Rodríguez (2025) demonstrated the usefulness of modelling both general and specific factors, which aligns with the hierarchical structure identified in the present research. Issues related to model evaluation and measurement invariance have been extensively examined in contemporary psychometric research. F.F. Chen (2007) analysed the sensitivity of commonly used fit indices, including CFI, TLI and RMSEA, to violations of measurement invariance. The author demonstrated that even relatively small deviations from invariance may lead to noticeable changes in fit indices, which can result in incorrect conclusions regarding model adequacy. Based on these findings, F.F. Chen (2007) emphasised the importance of cautious interpretation of fit indices and the need to consider the broader methodological context when evaluating model fit.

In turn, D. Svetina *et al.* (2020) focused on the problem of testing measurement invariance in models with categorical indicators. The authors proposed updated methodological guidelines for multiple-group confirmatory factor analysis using appropriate estimation techniques, including robust estimators designed for ordinal data. Their results showed that the use of conventional estimation methods may lead to biased parameter estimates and incorrect conclusions, whereas the application of specialised approaches significantly improves the accuracy of model evaluation. The methodological approach applied in the present study is consistent with these recommendations. In particular, the use of the WLSMV estimator and polychoric correlations reflects current best practices for analysing ordinal data, while the interpretation of model fit indices takes into account their known sensitivity to model specification and data characteristics.

Ukrainian studies have also contributed to the development of psychometric instruments. Z. Karpenko & A. Klympush (2025) validated the Ukrainian adaptation of the HEXACO personality inventory, demonstrating the importance of cultural adaptation. L. Kolesnichenko & A. Homeniuk (2025) confirmed the psychometric properties of the Decision Conflict Scale. L.V. Muzychko & Ya.L. Chernyshova (2025) developed a Ukrainian version of the acculturation strategies questionnaire. V. Olefir & V. Bosniuk (2024) validated the basic psychological needs satisfaction scale, and O. Shtepa (2024) examined

issues of content validity in self-reflection measurement. A. Trotsenko (2025) proposed a scale of personal dynamics as a tool for assessing personality change. These studies indicated that contemporary Ukrainian psychology actively develops psychometric approaches to measuring complex psychological constructs. In this context, the I-PC-5 contributes to this field by offering an integrative diagnostic model of psychological culture. Overall, the findings of the present study are consistent with contemporary theoretical and empirical research and extend existing knowledge by providing evidence for the hierarchical structure of psychological culture and a validated instrument for its assessment.

Conclusions

The present study provided the psychometric validation of the diagnostic instrument "Index of Psychological Culture of Personality (I-PC-5)", developed to assess psychological culture as a multidimensional personal resource. The findings of the study consistently support the proposed theoretical model and confirm the structural organisation of the construct. The results of confirmatory factor analysis demonstrated that the five-component structure of psychological culture is empirically substantiated and that the components are meaningfully integrated within a second-order latent factor. The obtained model fit indices indicate a good correspondence between the empirical data and the theoretical model, which confirms the adequacy of the proposed measurement structure. The hierarchical model, in particular, supports the interpretation of psychological culture as a unified yet internally differentiated construct. Reliability analysis further strengthens these conclusions by demonstrating a high level of internal consistency across all scales of the instrument. Both Cronbach's alpha and McDonald's omega

coefficients exceeded the recommended threshold values, confirming the stability and coherence of the measurement. The high reliability of the integral index indicates that the overall score can be used as a consistent indicator of psychological culture.

Taken together, these results demonstrated that the I-PC-5 instrument possesses satisfactory psychometric properties, including structural validity and internal reliability. The findings confirm that the instrument provides a theoretically grounded and empirically supported assessment of psychological culture. From a practical perspective, the validated structure of the instrument allows for its application in empirical research, monitoring programmes and psychological support initiatives. The possibility of analysing both the overall level of psychological culture and the profiles of its individual components expands the analytical potential of the method and enables a more nuanced understanding of personal psychological resources. Thus, the I-PC-5 may be considered a reliable and valid diagnostic tool for assessing psychological culture in contemporary educational and professional contexts. Further research may focus on expanding the empirical basis of the I-PC-5, clarifying the stability of its psychometric properties in different educational and professional contexts, and examining its applicability for monitoring and psychological support programmes.

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None.

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Психометрична валідація індексу психологічної культури особистості (I-PC-5)

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Анотація. Актуальність дослідження зумовлена потребою у валідному та надійному інструменті оцінювання психологічної культури як інтегративного особистісного й професійного ресурсу в умовах сучасних соціальних трансформацій та професійних викликів в освітньому середовищі. Метою дослідження була психометрична валідація комплексного психодіагностичного інструмента «Індекс психологічної культури особистості (I-PC-5)». Дослідження ґрунтувалося на багатовимірній теоретичній моделі психологічної культури та передбачало застосування підтверджувального факторного аналізу з використанням оцінювача зважених найменших квадратів із корекцією середнього та дисперсії, оцінювання показників відповідності моделі – порівняльного індексу відповідності (CFI), індексу Такера – Льюїса (TLI), середньоквадратичної похибки апроксимації (RMSEA), стандартизованого середньоквадратичного залишку (SRMR), а також оцінювання внутрішньої узгодженості за допомогою коефіцієнтів альфа Кронбаха та омега Макдональда. Результати засвідчили, що п'ятифакторна модель першого порядку демонструє задовільну відповідність емпіричним даним, підтверджуючи теоретичну структуру конструкта. Ієрархічна модель другого порядку також виявила прийнятні показники відповідності, що підтверджує наявність загального латентного фактора, який репрезентує психологічну культуру як інтегрований особистісний ресурс. Усі факторні навантаження були статистично значущими та засвідчили вагомий внесок кожного компонента в загальний конструкт. Показники внутрішньої узгодженості для всіх шкал перевищили рекомендовані порогові значення (α та $\omega \geq .70$), що свідчить про високу надійність. Крім того, помірні кореляції між факторами підтвердили їхню концептуальну відмінність і водночас підтримали багатовимірну структуру конструкта. Отримані результати свідчать, що інструмент забезпечує стабільне й теоретично обґрунтоване вимірювання психологічної культури. Інструмент може застосовуватися в емпіричних дослідженнях, моніторингових програмах і програмах психологічного супроводу педагогічних працівників та представників інших професійних груп.

Ключові слова: особистісні психологічні ресурси; багатовимірний конструкт; підтверджувальний факторний аналіз; валідність; надійність; інтегральний індекс