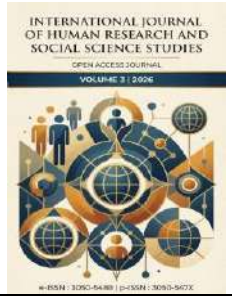
International Journal of Human Research and Social Science Studies

ISSN(p): 3050-547X, ISSN(e): 3050-5488

Volume 03 Issue 05 May, 2026

DOI: https://doi.org/10.55677/ijhrsss/18-2026-Vol03I05

Page No : 471-476



Typology of Profiles of Psychological Readiness of Psychologists for Decision-Making in Stressful Conditions: Results of Cluster Analysis

Medvid I. V.
Applicant of the third (educational and scientific) level of higher education,
Department of Theoretical and Counseling Psychology
Mykhailo Dragomanov Ukrainian State University

ABSTRACT: The article presents the results of an empirical study of the typology of psychological readiness profiles of psychology Master's students for decision-making under stressful conditions. In the context of martial law in Ukraine, psychologists face the necessity of making professional decisions under high pressure while working with traumatized populations, which actualizes the problem of purposeful stress resilience development during professional training. Using k-means cluster analysis on a sample of 287 Master's students in psychology from 6 Ukrainian higher education institutions, three qualitatively distinct readiness profiles were identified: «vulnerable competence» (24.7%), «functional adaptability» (56.4%), and «resilient mastery» (18.8%). The profiles differ statistically significantly across cognitive components (cognitive flexibility, tolerance for uncertainty), emotional-regulatory components (stress resilience, emotion regulation difficulties, psychological distress), motivational-volitional components (professional self-efficacy, coping strategies), and effectiveness of professional decision-making ($p < .001$). The critical vulnerability of one quarter of students (decision-making effectiveness $M = 32.1$, below the threshold for safe practice) indicates a systemic gap in educational programs. The identified typology substantiates the necessity of a differentiated approach with three training trajectories: an intensive programme for the vulnerable profile (75 hours, VR simulations, biofeedback, individual supervision), a basic program for the adaptive profile (60 hours, cognitive training, group supervision), and an advanced program for the resilient profile (45 hours, mentoring role, complex cases). The practical value lies in creating a diagnostic foundation for personalised educational pathways. The theoretical novelty consists in the transition from a variable-centered to a person-centered approach that considers readiness components as holistic configurations of different types of professionals.

Corresponding Author:
Medvid I. V.

Published Online:
May 28, 2026

KEYWORDS:
professional readiness, professional decision-making, stressful conditions, cluster analysis, profile typology, stress resilience.

Cite the Article: *Medvid I. V. (2026). Typology of Profiles of Psychological Readiness of Psychologists for Decision-Making in Stressful Conditions: Results of Cluster Analysis. International Journal of Human Research and Social Science Studies,3(5),471-476. https://doi.org/10.55677/ijhrsss/18-2026-Vol03I05*

Professional activity psychologist - practice characterized by necessity accept responsible professional decision in conditions uncertainty , shortage time and high stress that does psychological readiness to adoption solutions in stressful conditions one with key professionally important qualities specialist . In the conditions of martial law in Ukraine, psychology students are faced with the need to provide psychological assistance to the traumatized population, military personnel, and internally displaced persons already during their studies. At the same time, traditional training programs are mainly focused on cognitive-theoretical training, paying insufficient attention to the targeted development of stress resistance and the ability to make effective decisions under pressure.

Classical models of decision-making [10; 14] have established the patterns of bounded rationality and cognitive biases under pressure. Neurocognitive studies [1; 2] have revealed the mechanisms of the influence of stress on the prefrontal cortex, which disrupts executive functions and reduces the quality of decisions. The transactional model of stress [11] explains individual differences through cognitive assessment of the situation and coping resources of the individual. An important approach to professional readiness is as an integrative characteristic that combines cognitive (flexibility, tolerance to uncertainty), emotional-regulatory (stress tolerance, emotional regulation), motivational-volitional (professional self-efficacy, coping) components [3; 5; 9; 13].

Despite the rich theoretical foundation, the variable-centric approach dominates: researchers study individual predictors of decision-making effectiveness, but do not consider them as holistic configurations of different types of specialists. The person-centric approach through cluster analysis allows us to identify qualitatively different profiles of students with different patterns of strengths and weaknesses, which can become the basis for differentiated training programs. At the same time, empirically substantiated typologies of profiles of readiness of future psychologists to make decisions under stressful conditions are currently absent.

The purpose of the article is to identify and describe the typology of profiles of psychological readiness of master's students of psychology for decision-making in stressful conditions based on cluster analysis of empirical data. Research objectives:

1) to conduct a cluster analysis of a sample of master's students in psychology according to indicators of cognitive, emotional-regulatory, motivational-volitional components of readiness and effectiveness of professional decisions;

2) identify the optimal number of profiles and describe their qualitative characteristics;

3) establish the statistical significance of differences between profiles in key readiness indicators;

4) interpret the identified profiles in the context of existing theoretical models of professional competence and decision-making under stressful conditions;

5) formulate practical recommendations regarding a differentiated approach to the training of students of different profiles.

PRESENTATION OF THE MAIN RESEARCH MATERIAL

The empirical study was conducted from November 2023 to May 2024 and included 287 undergraduates in psychology from six universities in Ukraine located in three geographical zones: southern (Melitopol State Pedagogical University named after Bohdan Khmelnytsky, Odessa National Economic University), central (Mykhailo Drahomanov Ukrainian State University, Mykola Gogol Nizhyn State University, State University of Trade and Economics) and eastern (V. N. Karazin Kharkiv National University). Regional diversification of the sample allowed us to take into account differences in the conditions of professional training depending on the intensity of the impact of martial law on the educational process, which ensured the ecological validity of the results. The study was conducted on the basis of voluntariness and informed consent of participants in compliance with ethical standards approved by the commissions of the participating universities.

A set of standardized methods was used to assess the components of readiness: stress tolerance (CD-RISC-25; K. Connor and J. Davidson [7]), cognitive flexibility (CFS ; M. Martin and R. Rubin [13]), intolerance of uncertainty - a reversible indicator (IUS -12; R. Carlton and colleagues [4; 5]), emotional dysregulation (DERS - PS ; K. Gratz and L. Romer [8]), coping strategies with differentiation of adaptive and maladaptive forms (Brief COPE ; K. Carver [6]), current psychological distress (DASS -21; P. Lovibond and S. Lovibond [12]). The effectiveness of professional decisions was assessed through the author's procedure of analyzing responses to seven case scenarios that recreate critical situations in psychological practice (suicidal risk, limits of competence, violation of professional boundaries, confidentiality, crisis intervention, cultural sensitivity, conflict of interest). Expert assessment was carried out according to six criteria: problem identification, variability of strategies, ethical adequacy, reflection of limitations, use of resources, reasonableness of choice (range 0-420 points, inter-expert agreement $ICC = 0.87$).

Respondents were asked to formulate and justify their own decision for each situation. The expert assessment of the answers was carried out by three psychologists with supervisory experience according to six parameters: identification of the problem and ethical dilemmas, production of alternatives, ethical adequacy, awareness of one's own limits of competence, involvement of professional support, logical reasoning (0-10 points each parameter, total 0-420 points; inter-expert agreement ICC=0.87).

Profile typology detected using the k-means method in *Jamovi* v 2.2.5 based on seven standardized indicators: stress tolerance, cognitive flexibility, tolerance for uncertainty (reversed), emotional regulation difficulties (reversed), professional self-efficacy, adaptive coping, and case decision effectiveness. Testing of models with 2-5 clusters showed that the three-cluster solution optimally combines statistical quality (silhouette coefficient $= 0.68$) and meaningful interpretability. Intergroup differences were verified by one-way ANOVA with Bonferroni correction.

Cluster analysis discovered optimal decision with three profiles that explains 64.2% of the total dispersion data . The profiles are statistically significantly different in all cluster-forming variables ($p < .001$, see Table 1) and demonstrate high

classification quality (silhouette coefficient = 0.68, indicating good cluster separation). The distribution of the sample by profiles is uneven: the most numerous is the "functional adaptability" profile (56.4%, $n = 162$), which accounts for more than half of the sample; the "vulnerable competence" profile covers a quarter of students (24.7%, $n = 71$); the smallest is the "resilient mastery" profile (18.8%, $n = 54$). This uneven distribution has important practical significance: it indicates that most students are in the "gray zone" of average readiness, while the extreme poles (low and high readiness) are relatively rare. A comparative description of the profiles by key indicators is presented in Table 1. Below is a detailed qualitative description of each profile with an interpretation of the psychological meaning of the identified patterns.

Table 1. Comparative characteristics of the three readiness profiles

Indicator	Profile 1 "Vulnerable competence" (24.7%, $n = 71$)	Profile 2 "Functional adaptability" (56.4%, $n = 162$)	Profile 3 "Resilient Mastery" (18.8%, $n = 54$)
COGNITIVE COMPONENT			
Cognitive flexibility	$M = 46.8$	$M = 53.2$	$M = 58.6$
Tolerance for uncertainty	$M = 38.2$	$M = 44.8$	$M = 49.4$
EMOTIONAL-REGULATIVE			
Emotional regulation difficulties	$M = 94.2$	$M = 82.6$	$M = 71.4$
Stress resistance (CD-RISC)	Low	Medium	High
Depression (DASS-21)	$M = 16.8$	$M = 10.2$	$M = 6.4$
Anxiety (DASS-21)	$M = 14.2$	$M = 8.6$	$M = 5.2$
Stress (DASS-21)	$M = 18.4$	$M = 11.8$	$M = 7.2$
EFFECTIVENESS OF SOLUTIONS			
Overall efficiency (0-60)	$M = 32.1$(below the threshold)	$M = 38.4$(reasonably)	$M = 44.6$(close to max)
Generation of alternatives	1-2 strategies	2-3 strategies	4-6 strategies
Recognizing ethical dilemmas	Blind spots	Recognize, need supervision	Subtle nuances
DECISION-MAKING STYLES			
Dominant style	Procrastination, avoidance	Vigilant ($M = 8.8$), situationally maladaptive	Vigilant ($M = 10.4$), stable
CHARACTERISTIC	The paradoxical combination of academic success and functional vulnerability	Normative competence vulnerable to extreme stressors	"Gold standard", potential mutual mentoring

Note: All differences between profiles are statistically significant at the $p < .001$ level (ANOVA with Bonferroni post-hoc tests). F is the F-test value; p is the significance level.

Profile 1: " Vulnerable " competence " (24.7%, $n = 71$). For this profile characteristic paradoxical combination : academic progress in calm conditions combines with sharp deterioration functioning under stress . Cognitive indicators reduced (flexibility $M = 46.8$, tolerance to uncertainties $M = 38.2$), which interpreted as emotional blockade cognitive resources under pressure distress , and not as intellectual deficit . Critical there are efficiency professional solutions ($M = 32.1$), which lower threshold safe practices : qualitative analysis reveals ethical blind zones , risks retraumatization client , impulsive decision . Emotionally - regulatory sphere characterized by dysfunctional distress (depression) $M = 16.8$, anxiety $M = 14.2$, stress $M = 18.4$), which creates self-reinforcing loop : stress destroys regulation , this strengthens stress . Dominate maladaptive styles decisions – procrastination and avoidance . Students this one groups need intensive support with possible temporary restriction independent practices .

Profile 2: "Functional Adaptability" (56.4%, $n = 162$). The most numerous profile represents normative competence: basic sufficient for typical situations, but vulnerable to extreme stressors. Average cognitive indicators (flexibility $M = 53.2$, tolerance $M = 44.8$) ensure adequate functioning under moderate stress, but may temporarily decrease under additional pressure. Decision-making effectiveness ($M = 38.4$) is acceptable for supervised practice: students recognize ethical dilemmas, generate 2-3 alternatives, demonstrate basic reflection, but require support for complex cases. Emotional regulation is moderately difficult ($M = 82.6$), distress is manageable (depression $M = 10.2$, anxiety $M = 8.6$, stress $M = 11.8$). The vigilant decision-making style

dominates, although episodes of maladaptive strategies are possible under pressure. This group is the main audience of training programs: it has a sufficient basic level for development and the potential to move to a higher profile with systematic training.

Profile 3: "Resilient Mastery" (18.8%, $n = 54$). This profile represents a standard of professional readiness: stable high efficiency regardless of the intensity of stress. Cognitive indicators are maximal (flexibility $M = 58.6$, tolerance $M = 49.4$), which reflects the release of cognitive resources due to effective emotional regulation. The effectiveness of decisions approaches the maximum ($M = 44.6$): students recognize subtle ethical nuances, generate 4-6 alternatives with awareness of their advantages and limitations, adequately assess the boundaries of competence, proactively use supervision as a development resource. Emotional regulation is effective (difficulties $M = 71.4$), distress is minimal (depression $M = 6.4$, anxiety $M = 5.2$, stress $M = 7.2$), but the presence of moderate stress confirms: stress resistance does not mean the absence of stress, but the ability to function despite it. The vigilant decision-making style consistently dominates even under extreme pressure. Students of this profile can perform a mentoring role for other groups.

Summarizing the description of the three profiles, we interpret them not as fixed "personality types" determined by genetics or early developmental history, but as dynamic states that can change under the influence of systematic interventions. The identified typology is not a diagnosis, but a diagnostic basis for targeted development: the profiles are points on the continuum of professional competence development, where the transition from "vulnerable" to "functional" and further to "resilient" competence is a realistic goal of formative programs, supported by targeted interventions for the specific deficits of each group.

The identified typology implements a person-centered approach, considering the components of readiness as holistic configurations of different types of specialists, rather than isolated predictors. This is consistent with the understanding of professional competence as a systemic quality with synergistic, rather than additive, interaction of components [3].

The typology clarifies the classical theory of bounded rationality [14]: the transition from optimization to satisfactory strategies under stress is not universal, but differentiated. The profile "resilient mastery" maintains complex analytical strategies under pressure, "functional adaptability" switches to simplified ones (2-3 alternatives), "vulnerable competence" demonstrates a collapse of analysis with impulsivity or avoidance. This indicates: individual differences in stress resistance can moderate the quality of decisions more strongly than situational factors.

The results complement neurocognitive models [1; 2] with individual differences in the vulnerability of prefrontal functions to stress: the "vulnerable competence" profile is characterized by increased vulnerability, "resilient mastery" by resistance. The typology also develops the transactional model [11], revealing different patterns of cognitive appraisal: threat catastrophizing in the first profile, realistic appraisal in the second, and perception of stress as a challenge in the third.

The critical vulnerability of a quarter of students (decision effectiveness below the threshold for safe practice) points to a systemic gap in educational programs. The traditional approach of uniform training leaves 24.7% of future psychologists unprepared to practice in stressful conditions, which creates ethical risks for clients, especially in martial law.

We offer a differentiated training system with three trajectories according to readiness profiles. For the "vulnerable competence" profile, an intensive program (75 hours) has been developed: emotional regulation (DBT techniques, mindfulness), VR simulations of stressful situations, biofeedback training for self-regulation, weekly individual supervision. Training should precede admission to client work to form a basic level of stress resistance in safe conditions.

For the "functional adaptability" profile, a basic program (60 hours) is shown: development of cognitive flexibility, tolerance for uncertainty through ambiguous cases, training in decision-making under time pressure, group reflective practice. Emphasis on stabilizing efficiency, not compensating for deficits.

For the "resilient mastery" profile, an in-depth program (45 hours) is recommended: peer mentoring, complex professional cases (ethical dilemmas, multiple trauma), development of research and supervisory skills.

The developmental, not stigmatizing, nature of differentiation is fundamentally important. Profiles are dynamic states on a continuum of development, not fixed types. The results of formative work show: about 60% of students with a vulnerable profile move to an adapted one after intensive training, which confirms the plasticity of profiles. Typology is considered as a diagnostic basis for targeted development, not selection, which is consistent with the theory of the formation of abilities through experience [3].

Our position is based on A. Bandura's social learning theory [3], which postulates that most human abilities, including emotional regulation and stress tolerance, are not innate talents, but are formed through experience, observation of models and interpretation of one's own states. If stress tolerance is an innate trait, then students with low stress tolerance are indeed "unsuitable". But if stress tolerance is formed – and neuroplasticity studies convincingly confirm this [1] – then low stress tolerance is not a sentence, but a starting point for purposeful development. Our experience of formative work shows that systematic emotional regulation training, exposure to stressful situations in safe control (through VR simulations) and reflective supervisory support can significantly increase stress tolerance even in students with an initially low level.

At the same time, we insist on a responsible approach to admission to independent practice. Professional ethics require that a psychologist not harm the client – this is a fundamental principle enshrined in all ethical codes of psychological associations. In a military context, when many clients are experiencing acute or chronic trauma, erroneous decisions by a

psychologist can have particularly devastating consequences: retraumatization due to incorrect intervention, exacerbation of suicidal tendencies due to missed warning signals, violation of confidentiality due to the psychologist's panic reaction to difficult material. Therefore, we consider it justified to temporarily restrict independent practice for students with a "vulnerable competence" profile until they reach a minimum threshold of stress tolerance during intensive training. This is not punishment or discrimination, but a concern for the safety of both the student (who may receive secondary trauma from premature exposure to difficult client cases without sufficient regulatory resources) and his future clients.

We also want to emphasize that the identified typology does not exhaust the entire complexity of professional readiness. The three profiles are a simplification of reality for practical purposes – to make the heterogeneity of students visible and manageable for educational programs. But each student is a unique configuration of strengths and weaknesses, and the profile is only a first approximation that should be supplemented by individual analysis. For example, two students with the "functional adaptability" profile may have different patterns: one – high cognitive flexibility with moderate stress resistance, the other – high stress resistance with moderate cognitive flexibility. Both fall into the same profile in terms of the general level of readiness, but require different emphases in training. Therefore, an ideal training system should combine differentiation by profiles (group programs for students with similar needs) with individualization (taking into account the unique characteristics of each student).

Finally, we would like to draw attention to the ethical dimensions of using typology in training practice. Profile diagnostics should not be a "secret" known only to teachers – students have the right to know the results of the diagnostics and their interpretation. Moreover, involving students in reflecting on their own profile can be a powerful educational tool: awareness of their own strengths and weaknesses is the first step towards purposeful self-development. At the same time, diagnostics should be accompanied by clear communication about the dynamism of profiles and development opportunities in order to avoid a self-fulfilling prophecy, when a student assigned to the "vulnerable competence" profile internalizes this as an unchanging identity and stops trying to develop.

The study has several limitations. First, the cross-sectional design (*one - time cross - sectional design*) does not allow us to establish causality and dynamics of profiles: it is not known whether profiles are stable over the course of education or are shaped by educational experience. Longitudinal follow-up with repeated measurements could reveal developmental trajectories and test the hypothesis that transitions between profiles can be induced by targeted interventions.

Second, case scenarios ($ICC = 0.87$) are not fully equivalent to real practice: the lack of emotional pressure and the opportunity to think about the answer can both overestimate (time for analysis) and underestimate (caution due to evaluation) the effectiveness compared to live consultation. Supplementing with observation of real sessions, supervisor and client assessments would increase ecological validity. Third, the sample is limited to master's students from six Ukrainian universities. It is not known whether the typology generalizes to experienced practitioners, other specializations (organizational psychology) or cultural contexts. Cross-cultural validation would test the universality of the typology. Fourth, the k-means method assumes a clear membership in one profile, while reality may include intermediate and mixed options. Latent profile analysis or *fuzzy clustering methods* would reveal nuances, although for practical purposes a clear classification is more convenient. Fifth, the military context may affect the distribution: either through self-selection (people with low stress tolerance are less likely to choose the profession), or through a general decrease in stress tolerance of the population. A comparative study in different contexts would reveal the effect of martial law.

CONCLUSIONS

Cluster analysis of a sample of 287 psychology undergraduates revealed three statistically significant profiles of readiness for decision-making under stress: "vulnerable competence" (24.7%, $n = 71$), "functional adaptability" (56.4%, $n = 162$) and "resilient mastery" (18.8%, $n = 54$). The profiles differ in cognitive, emotional-regulatory, motivational-volitional components and the effectiveness of professional decisions ($p < .001$; silhouette-coefficient $= 0.68$). The theoretical novelty lies in the implementation of a person-centered approach that considers the components of readiness as holistic configurations of different types of specialists. The typology clarifies classical models of decision-making [10; 14], complements neurocognitive models of stress [1; 2] individual differences in the vulnerability of prefrontal functions, develops the transactional model of coping (Lazarus & Folkman, 1984) by describing different patterns of cognitive assessment of stress. Practical value – justification of a differentiated approach with three trajectories. Critical vulnerability of a quarter of students ($M = 32.1$, below the threshold of safe practice) indicates a systemic gap in educational programs. The profile "functional adaptability" (56.4%) requires systematic training for stable effectiveness. The profile "resilient mastery" can perform a mentoring role. Key conclusion: profiles are dynamic states that change under the influence of educational interventions, which opens up the possibility of evidence-based improvement of psychologists' training through differentiation of educational trajectories. Promising areas of research in this scientific field can be considered: longitudinal tracking of developmental trajectories; testing differentiated programs with randomized evaluation of effectiveness; studying psychophysiological correlates through neuroimaging; cross-cultural validation; researching long-term professional consequences (burnout, satisfaction, retention in the profession).

REFERENCES

1. Arnsten A. F. T. Stress signalling pathways that impair prefrontal cortex structure and function. *Nature Reviews Neuroscience.* 2009. Vol. 10(6). P. 410–422. DOI: https://doi.org/10.1038/nrn2648.
2. Arnsten A. F. T. Stress weakens prefrontal networks: Molecular insults to higher cognition. *Nature Neuroscience.* 2015. Vol. 18(10). P. 1376–1385. DOI: https://doi.org/10.1038/nn.4087.
3. Bandura A. *Self-efficacy: The exercise of control*. New York : W.H. Freeman and Company, 1997. 604 p.
4. Carleton R. N., Norton M. A., Asmundson G. J. G. Fearing the unknown: A short version of the Intolerance of Uncertainty Scale. *Journal of Anxiety Disorders.* 2007. Vol. 21(1). P. 105–117. DOI: https://doi.org/10.1016/j.janxdis.2006.03.014.
5. Carleton R. N., Sharpe D., Asmundson G. J. G. Anxiety sensitivity and intolerance of uncertainty: Requisites of the fundamental fears? *Behaviour Research and Therapy.* 2016. Vol. 45(10). P. 2307–2316. DOI: https://doi.org/10.1016/j.brat.2007.04.006.
6. Carver C. S., Scheier M. F., Weintraub J. K. Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology.* 2010. Vol. 56(2). P. 267–283. DOI: https://doi.org/10.1037//0022-3514.56.2.267.
7. Connor K. M., Davidson J. R. T. Development of a new resilience scale: The Connor-Davidson Resilience Scale (CD-RISC). *Depression and Anxiety.* 2003. Vol. 18(2). P. 76–82. DOI: https://doi.org/10.1002/da.10113
8. Gratz K. L., Roemer L. Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure, and initial validation of the Difficulties in Emotion Regulation Scale. *Journal of Psychopathology and Behavioral Assessment.* 2004. Vol. 26(1). P. 41–54.
   DOI: https://psycnet.apa.org/doi/10.1023/B:JOBA.0000007455.08539.94.
9. Gross J. J., Jazaieri H. Emotion, emotion regulation, and psychopathology: An affective science perspective. *Clinical Psychological Science.* 2014. Vol. 2(4). P. 387–401. DOI: https://psycnet.apa.org/doi/10.1177/2167702614536164.
10. Kahneman D., Tversky A. Prospect theory: An analysis of decision under risk. *Econometrica.* 1979. Vol. 47(2). P. 263–291. DOI: https://doi.org/10.2307/1914185.
11. Lazarus R. S., Folkman S. *Stress, appraisal, and coping.* New York : Springer Publishing Company, 1984. 456 p. https://archive.org/details/stressappraisalc0000laza.
12. Lovibond P. F., Lovibond S. H. The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour Research and Therapy.* 1995. Vol. 33(3). P. 335–343. DOI: https://doi.org/10.1016/0005-7967(94)00075-u
13. Martin M. M., Rubin R. B. A new measure of cognitive flexibility. *Psychological Reports.* 1995. Vol. 76(2). P. 623–626. DOI: https://psycnet.apa.org/doi/10.2466/pr0.1995.76.2.623.
14. Simon H. A. A behavioral model of rational choice. *The Quarterly Journal of Economics.* 1955. Vol. 69(1). P. 99–118. DOI: https://psycnet.apa.org/doi/10.2307/1884852.