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**PARTICULARITIES OF COGNITIVE SCHEMAS AND
THE MANIFESTATION OF ACUTE STRESS IN
INTENSIVE CARE PATIENTS**

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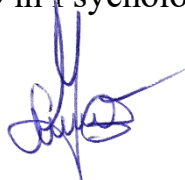


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CONCEPTUAL FRAMEWORK OF THE RESEARCH

Topicality and importance of the addressed theme. Hospitalization in intensive care units (ICU) constitutes a borderline situation defined by the sudden collapse of biopsychosocial homeostasis under the pressure of multidimensional stressors of extreme intensity [45; 47]. The topicality of the theme is derived from the invasive and depersonalizing nature of the critical clinical environment, where the advanced technology necessary to sustain vital functions acts paradoxically as a generator of profound psychological suffering (noise pollution, social isolation, and the neurocognitive impact of mechanical ventilation) [19; 42]. This traumatogenic constellation justifies the necessity of implementing integrated psychological intervention protocols starting from the acute phase, in accordance with current clinical directives [8; 57].

The importance of the research resides in the imperative of elucidating the profound cognitive mechanisms that mediate the process of adaptation and resilience under conditions of vital crisis [32]. The study substantiates the hypothesis according to which the patient's adaptive response is not exclusively dictated by the severity of the pathology, but is filtered through cognitive schemas (basic mental structures that process and, frequently, distort the interpretation of critical events) [9; 15]. In a context marked by uncertainty and extreme vulnerability, these cognitive architectures become essential predictors of psychological morbidity, such as anxiety, depression, or acute stress disorder [12; 46; 52].

The novelty and practical value of the present investigation are supported by arguing the necessity of a Cognitive and Emotional Support Program in ICU (SCE-ATI). This approach aims to reduce the incidence of long-term psychological sequelae, synthesized under the concept of post-intensive care syndrome (PICS), which includes persistent cognitive and functional impairments [18; 35; 51]. Consequently, the research proposes an essential methodological transition from the traditional biomedical model toward an integrated biopsychosocial model, meant to ensure not only biological survival, but also the preservation of psychological integrity and the optimization of the patients' quality of life [26; 39].

Integration of the theme into international and national concerns. In contemporary specialized literature, the experience of hospitalization in intensive care units (ICU) is recognized as a priority research direction, given the severe psychopathological impact on the individual. The long-term consequences of this clinical context have been formalized through the concept of post-intensive care syndrome (PICS), a clinical entity that represents a major public health challenge today [35]. The PICS syndrome encompasses persistent physical, cognitive, and psychological impairments, with meta-analyses indicating a worrying prevalence of post-traumatic stress disorder (10-50%), anxiety (23-48%), and depression (12-40%) at 6-12 months after discharge [18; 26; 43].

The evolution of the care paradigm has led to the emergence of the concept of PICS-Family (PICS-F), recognizing the vicious circle of suffering that affects relatives through traumatic and depressive symptomatology, thereby compromising the socio-professional reintegration capacity of the entire family system [18]. Within this global framework, the development of early intervention strategies, such as the Cognitive and

Emotional Support Program in ICU (SCE-ATI), becomes a clinical imperative for optimizing the recovery process and reducing systemic healthcare costs.

At the national and regional level (Romania and the Republic of Moldova), despite the alignment of the biological medical act with European standards of excellence, the integration of psychological support into ICU care protocols remains an insufficiently achieved objective. Although health psychology and clinical psychology have benefited from valuable theoretical contributions [1; 2; 4; 9], the empirical study of adaptation mechanisms under intensive care conditions requires a broader substantiation. Domestic publications are predominantly descriptive, there being a real need for experimental studies to analyze the intersection between profound cognitive processes and acute stress. This discrepancy between the effervescence of global research and the stage of regional literature constitutes the central justification of the present thesis, which proposes the professionalization of psychological assistance through validated techniques capable of supporting the psychophysiological homeostasis of patients [8; 10].

Synthesis of prior research regarding the investigated theme

The in-depth analysis of the specialized literature reveals a clear evolution of research, from the simple documentation of stress prevalence to a nuanced understanding of its causal mechanisms. The current endeavor is substantiated upon three major pillars: the identification of risk factors, the development of explanatory models, and the testing of intervention strategies.

Initially, the scientific focus centered on objective risk factors (age, female sex, previous psychiatric history) and clinical variables (disease severity, mechanical ventilation, sedation management) [42; 48]. However, these predictors do not fully explain the heterogeneity of individual adaptive responses. Thus, research shifted toward the patient's subjective experience, recognizing stress as a psychologically mediated process [33]. An essential direction was the exploration of the role of memory in shaping acute stress; Jones's studies [28] established a critical distinction between factual and delusional memories (hallucinations, dreamlike fragments). It was demonstrated that delusional memories, unintegrated into a logical narrative, function as *islands of psychological terror*, significantly increasing the risk of trauma chronicity [29].

This empirical foundation allowed the application of the cognitive model of post-traumatic stress disorder (PTSD), developed by Ehlers and Clark [21], within critical care medicine. The theoretical framework postulates that the persistence of stress is maintained by catastrophic interpretations (e.g., "my brain is destroyed") and maladaptive self-regulation strategies (avoidance, rumination), which block the natural processing of the traumatic experience [22; 24].

The analysis of this model within the ICU context represents the theoretical core of the present thesis.

On a practical level, methods such as intensive care diaries for narrative restructuring [29] or the optimization of the sensory environment [38] have been tested. Nonetheless, the synthesis of evidence indicates that most current interventions are punctual and do not target the deep maladaptive cognitive schemas [52], which function as filters that distort reality during moments of maximum vulnerability. This lacuna

justifies the necessity of the Cognitive and Emotional Support Program in ICU (SCE-ATI), whose innovation resides in its preventive and integrative approach: modifying cognitive-emotional coping strategies to prevent the crystallization of trauma and to facilitate the recovery of the patients' psychological integrity [10; 26; 57].

The research problem is formulated as follows: to what extent do cognitive structures influence the manifestation of acute stress in patients admitted to intensive care units, and how can these mechanisms be integrated into the design of personalized psychological interventions capable of facilitating their adaptation and recovery?

The research purpose consists in identifying and analyzing the relationship between the particularities of cognitive schemas (approached through the lens of cognitive-emotional coping strategies) and the manifestations of acute stress in hospitalized patients within intensive care units, as well as in developing, implementing, and validating the efficacy of an integrative-strategic psychological intervention program (SCE-ATI) aimed at modifying maladaptive cognitive schemas and diminishing the manifestations of acute stress, with the ultimate goal of facilitating the adaptation and recovery process of critically ill patients.

Research objectives:

1. Synthesis of the specialized literature regarding the theoretical and empirical foundations of acute stress within the critical medical context, as well as the role of maladaptive cognitive schemas in mediating it;
2. Identification of the maladaptive cognitive mechanisms and psychoaffective particularities of patients with acute stress admitted to intensive care units, alongside the analysis of the influence of trait anxiety and socio-demographic and clinical factors upon them;
3. Selection and utilization of a psychodiagnostic toolkit for assessing cognitive-emotional coping strategies and the manifestations of acute stress;
4. Correlational and predictive analysis of the relationship between maladaptive cognitive schemas (operationalized through cognitive-emotional regulation strategies) and the intensity of acute stress manifestations in patients admitted to the intensive care unit;
5. Designing and implementing the integrative-strategic psychological Cognitive and Emotional Support Program in ICU (SCE-ATI), substantiated upon systemic resignification interventions, grounding techniques, psychodramatic methods, and resource-oriented approaches;
6. Validating the efficacy of the Cognitive and Emotional Support Program in ICU (SCE-ATI) in reducing the manifestations of acute stress by optimizing maladaptive cognitive mechanisms in patients admitted to the intensive care unit.

General hypothesis: We assume that the intensity of acute stress manifestations in patients admitted to the Clinical Department of Anesthesia and Intensive Care is significantly influenced by the presence of maladaptive cognitive schemas, and the implementation of the integrative-strategic psychological intervention program SCE-ATI leads to a significant diminution thereof.

Specific hypotheses:

Hypothesis 1: We assume the existence of significant correlations between maladaptive cognitive schemas (operationalized through cognitive-emotional coping

strategies), trait anxiety, and the level of acute stress manifestations in patients admitted to intensive care units;

Hypothesis 2: We assume that maladaptive coping strategies (particularly catastrophizing) mediate the relationship between deep maladaptive cognitive schemas and the intensity of acute stress manifestations (expressed through the level of stress, state anxiety, and depressive symptomatology);

Hypothesis 3: We assume that patients in the experimental group who benefit from the Cognitive and Emotional Support Program in ICU (SCE-ATI) will exhibit a statistically significant reduction in acute stress manifestations at the post-test evaluation, compared to patients in the control group, as a result of the fact that traumatic experiences within the intensive care unit are cognitively resignified, thereby diminishing the impact of deep maladaptive schemas.

Research methodology. The research is structured upon a mixed-method design, utilizing:

Theoretical methods - specialized literature analysis, theoretical synthesis, information systematization, and the theoretical generalization method;

Empirical data collection methods and tools - targeting the causal chain: cognitive schemas (independent variable) → coping (mediating variable) → acute stress (dependent variable).

Quantitative tools: CERQ (Garnefski et al.) [23] – measures coping strategies as a manifestation of deep schemas; DASS-21R (Lovibond & Lovibond) [33] – assesses the stress-anxiety-depression triad; STAI-Y (Spielberger) [46] – differentiates state anxiety from trait anxiety; Socio-demographic and clinical data sheet – analyzes moderating factors (age, diagnosis, ICU length of stay).

Qualitative tools: semi-structured thematic interview and clinical observation, utilized to capture the phenomenological nuances of resignification;

Data analysis methods - data processing (IBM SPSS v.21) – *descriptive statistics:* frequencies, means, standard deviations; *inferential statistics:* Spearman (schema-stress correlations), t-test (group comparisons), ANOVA (categorical differences), Wilcoxon (significance of pre/post-test progress within the experimental group); *qualitative analysis:* thematic content analysis and the case study method to validate the trauma resignification process.

Scientific novelty and originality - consists in designing and testing the efficacy of the psychological Cognitive and Emotional Support Program in ICU (SCE-ATI), a structured psychological intervention framework specifically configured to respond to the idiosyncratic needs and strict clinical limitations of critically ill patients. The program's innovation derives from the synergy of experiential and strategic-adaptive techniques, offering a distinct methodological perspective compared to classical approaches, focused on the rapid resignification of the traumatic experience and emotional regulation performed directly at the patient's bedside.

Theoretical significance of the work resides in substantiating an original explanatory model regarding the predictive role of maladaptive cognitive schemas in the dynamics of acute stress in critical patients. The research extends psychological knowledge by demonstrating the interdependence between deep cognitive structures (independent variable) and adaptation mechanisms (mediating variable) under

conditions of vital threat, providing novel empirical data about information processing within the intensive care environment.

Practical value of the thesis consists in designing and validating the Cognitive and Emotional Support Program in ICU (SCE-ATI), an integrated evaluation and intervention model adapted to the physiological limitations of the critical patient. The results confirm the efficiency of individualized psychological support and substantiate the necessity of integrating it as a care standard for optimizing resilience and preventing post-traumatic sequelae.

Approval of scientific results. The validity and originality of the endeavor are confirmed through the publication of scientific papers in specialized journals and proceedings of dedicated conferences, including 12 full-text articles (9 in scientific journals and 3 in proceedings of scientific events) and 4 abstracts of scientific communications, ensuring the dissemination of the results within the international and national academic community.

Summary of thesis compartments. The work comprises abstracts, an introduction, 3 chapters, general conclusions and recommendations, a bibliography of 177 titles, 21 appendices, 141 pages of main text, 9 figures, and 15 tables.

Keywords: cognitive schemas, acute stress, anxiety, depression, coping strategies, intensive care, psychological intervention.

SUMMARY OF THE THESIS CONTENT

The **Introduction** substantiates the topicality and importance of the addressed theme, its integration into international and national concerns, as well as the relevance of prior research results. It presents the purpose, objectives, research problem, and tools utilized, highlighting the relevance of investigating the particularities of cognitive schemas and acute stress in hospitalized intensive care patients. Furthermore, it reflects the summary of the thesis compartments, outlining the structure and general content of the work.

Chapter 1. Theoretical-empirical orientations in the study of the particularities of cognitive schemas and acute stress in hospitalized intensive care patients contains 5 subchapters and aims to conduct the specialized literature analysis regarding the psychological concepts referenced within the research.

In the first subchapter, **1.1. Conceptual frameworks of cognitive schemas and the analysis of psychological vulnerability mechanisms to acute stress through the lens of cognitive-emotional regulation strategies**, the topicality of the research resides in correlating deep mental structures with the neurovegetative response. Cognitive schemas are defined as early developed mental maps that govern information processing and emotional reactions [9; 15]. Within the invasive environment of intensive care, these structures become the primary engine of acute stress. According to the Geoffroy model (2013), critical hypercortisolemia massively activates the amygdala and negative survival schemas, generating a cognitive freezing that blocks neocortical logic [14]. We argue that this refuge into early maladaptive schemas (EMS) represents an archaic protective strategy, explaining the failure of purely rational interventions at the patient's bedside.

The evolution of the schema concept provides the epistemological foundation for understanding vulnerability. Moving from Aaron T. Beck's **cognitive triad** (1967), which describes a negative view of the self, the world, and the future [15], research reached the multidimensional model of Jeffrey Young (1990), who identified 18 early maladaptive schemas (EMS) grouped into five fundamental domains, which we analyze in relation to the intensive care environment:

1. *The disconnection and rejection domain* - includes the schemas of abandonment and mistrust. We consider that this domain is the most severely affected by the isolation protocol; the absence of family is interpreted as a reconfirmation of a lack of personal value, collapsing coping resources.

2. *The impaired autonomy and performance domain* - encompasses vulnerability to harm or illness. Bedridden immobilization and dependence on medical devices violently activate this domain, explaining the elevated scores in state anxiety (STAI-Y1).

3. *The impaired limits domain* - patients with these schemas tend to exhibit low compliance, interpreting hospital rules as an aggression against their own freedom [5; 27].

4. *The other-directedness domain* - includes self-sacrifice. We argue that these patients are the silent victims who underreport pain so as not to disturb the staff, which masks the real severity of stress.

5. *The overvigilance and inhibition domain* - directly feeds catastrophizing. Any fluctuation of the monitors is processed as a certain indicator of imminent death, blocking the capacity for positive reappraisal [53].

Due to clinical limitations, the use of the CERQ questionnaire is justified by the fact that regulation strategies (catastrophizing, rumination) represent the operational manifestation of latent schemas [25]. Integrating Leahy's perspective (2019) highlights the role of metacognition (the fear of one's own fear) in the self-maintenance of stress. Within the Romanian academic space, the contributions of D. David, M. Ciumăgeanu, and V. Mărineanu [6] substantiate the necessity of an integrative approach. Rescripting scenarios through symbolic techniques is not a theoretical luxury, but a clinical necessity when the vulnerability schema freezes the patient within a terrifying present.

In **subchapter 1.2. Theoretical and clinical perspectives on the manifestation of stress: from biological models to the specifics of the intensive care unit**, the evolution of theoretical paradigms regarding stress is analyzed, moving from purely physiological approaches to complex cognitive models, thereby reflecting the complexity of human adaptation. The point of reference remains the general adaptation syndrome (GAS) proposed by Hans Selye (1936), which describes the systemic effort to maintain homeostasis through the stages of alarm, resistance, and exhaustion [47]. We argue that within intensive care, the classical "fight or flight" models (Cannon, Selye) present a major limitation: the critical patient experiences massive endocrine activation (cortisol, adrenaline), yet remains physically captive due to immobilization and medical devices. This discrepancy between biological hyperactivation and motor paralysis transforms adaptive energy into an internal aggression, accelerating exhaustion and compromising healing [7; 42].

Beyond automated mechanisms, the transactional model (Lazarus and Folkman, 1984) explains the variability of reactions through the processes of primary and secondary appraisal [33]. In our view, maladaptive cognitive schemas vitiate both stages,

amplifying the threat and minimizing perceived resources, a fact that transforms coping into a process of stress amplification through catastrophizing [33; 52]. In this state of crisis (Roberts, 2005; Caplan, 1964), the homeostatic balance is ruptured, and prior mechanisms become inoperative [54].

We emphasize the importance of the Palo Alto model (Watzlawick et al., 1967) [49], through which the technique of reframing becomes a central clinical tool. This allows the transmutation of the perception of medical technology from an *invasion* to a *technological ally*, aiming to interrupt the activation of the HPA (hypothalamic-pituitary-adrenal) axis and facilitate clinical cooperation [50; 51]. In conclusion, the subchapter demonstrates that acute stress in critical care medicine is the result of a transaction vitiated by cognitive vulnerability, requiring simultaneous intervention upon biological stability and psychological meaning.

In subchapter 1.3. Psychological aspects associated with patients hospitalized in the Clinical Department of Anesthesia and Intensive Care, a phenomenological and clinical analysis of the critically ill patient is conducted, marking the transition from theoretical models to clinical reality. Hospitalization in the intensive care unit represents a crisis situation (isolation, medical invasiveness, vital threat) that generates severe cognitive, emotional, and behavioral symptoms [11], with the diagnosis of acute stress disorder (ASD) representing the immediate intervention window (3-30 days) necessary to prevent the crystallization of trauma into post-traumatic stress disorder (PTSD) [12; 40]. The analysis targets the multidimensional symptom picture:

Cognitive symptomatology - includes delirium (confusion, hallucinations), executive dysfunction (loss of the role of self), and perceptual disturbances (fragmented memories in the form of *islands of terror*), processes that block adaptation [12; 23; 31; 35; 36; 37; 43; 51].

Emotional symptomatology - manifests through the anxiety-depression-acute stress triad, lability, and somatic reactivity [25; 35; 40; 44]. A central role is held by the metacognition of pain (Leahy), where "fear of one's own fear" self-maintains stress by interpreting anxiety as a signal of imminent death [3].

Behavioral symptomatology - agitation, aggressiveness, or withdrawal do not represent a lack of compliance, but are clinical manifestations of the activation of the hypothalamic-pituitary-adrenal (HPA) axis and of rigid cognitive schemas in the face of physical helplessness [35; 39; 50].

We argue, in accordance with the Palo Alto model (Watzlawick), that avoidance constitutes a *dysfunctional attempted solution* [51]. The early identification of these indicators through the CERQ, DASS-21R, and STAI-Y scales allows for a shift from the medicine of the *diseased organ* to the medicine of the *person in crisis*. Intervention through reframing and anchoring techniques (psychodrama) acts as an external support for collapsed executive functions, diminishing the risk of progression toward post-intensive care syndrome (PICS) [10; 31; 48].

Subchapter 1.4. The relationship between the particularities of cognitive schemas, operationalized through cognitive-emotional coping strategies, and acute stress in emergency hospitalized patients, explains the mechanism through which an invisible vulnerability (the schema) transforms into clinical suffering (acute

stress). Within the psychological architecture of the critical patient, early maladaptive schemas (EMS) represent rigid mnesic structures that predetermine the processing of medical trauma [52]. The methodological distinction is essential: the schema constitutes the distal cause (the distorted lens), whereas cognitive-emotional coping (CERQ) represents the proximal mediator (the active management effort) [45]. From a neurobiological perspective, the perception of danger dictated by the schema activates the Hypothalamic-Pituitary-Adrenal (HPA) axis (Figure 1.4), releasing cortisol and maintaining an exhausting physiological alert [50].

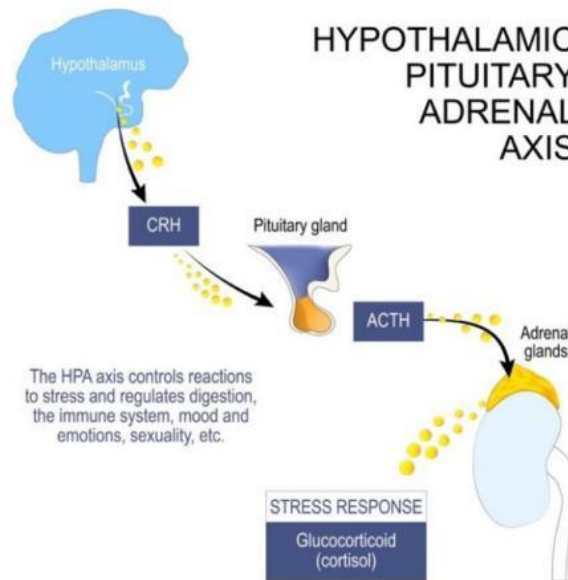


Figure 1.4 The mechanism of hypothalamic-pituitary-adrenal (HPA) axis activation under the influence of psychological stressors

The research substantiates a causal-explanatory model in which maladaptive cognitive schemas (independent variables) do not produce acute stress directly, but rather vitiate trauma processing by being operationalized into dysfunctional coping strategies (mediating variables), such as catastrophizing or rumination, thereby generating the clinical output of anxiety, depression, and stress (dependent variables) which can be recalibrated through resignification interventions and experiential techniques, thus providing the foundation for the intervention program proposed in the present thesis.

Chapter 1 concludes with **1.5. Conclusions**, which synthesize the fundamental theoretical aspects investigated:

1. Cognitive schemas are deep mental structures for organizing reality that significantly influence the perception of and reaction to stress. The patients' mental models and prior experiences act as precursors to the stress response, necessitating their evaluation prior to any psychological assistance.
2. Stress represents a multidimensional construct that goes beyond the physiological alarm response, being defined by the dynamic interaction between the cognitive

appraisal of the threat and the available coping resources. Thus, the response to illness is dependent upon the patient's psychological structure.

3. The specific traumatic impact of the intensive care environment, marked by depersonalization, the invasiveness of procedures, and the loss of autonomy, can disintegrate adaptive mechanisms, generating dissociative or anxious reactions that mark the transition from physiological stress to acute stress disorder, with early diagnosis being vital for preventing chronicity in the form of post-traumatic stress disorder.

4. The interconnection between cognitive schemas and cognitive-emotional regulation strategies directly mediates how patients perceive the therapeutic environment, substantiating the hypothesis according to which psychological support focused on increasing the flexibility of coping mechanisms reduces the severity of anxiety and depression manifestations, thereby diminishing the risk of post-intensive care syndrome (PICS).

5. The complexity of the psychosomatic response justifies the integration of resignification and psychodramatic techniques into the medical protocol, facilitating the release of emotional tension and optimizing treatment compliance.

6. The theoretical synthesis of acute stress characteristics substantiates the necessity of empirically exploring the interaction between deep perceptions (cognitive schemas) and the adaptation mechanisms (coping) of patients. This theoretical foundation constitutes the mandatory premise for testing the research hypotheses within the subsequent experimental endeavor.

Chapter 2. Empirical analysis of the particularities of cognitive schemas and the manifestation of acute stress in hospitalized intensive care patients includes the subchapters describing the ascertaining experiment.

In **subchapter 2.1. Design of the psychodiagnostic endeavor**, the methodology of the ascertaining research, the experimental design, the constitution of the experimental sample, and the toolkit utilized for establishing the relationship between the activation of cognitive schemas and the manifestation of acute stress are presented.

The purpose of the empirical endeavor consists in identifying and deeply analyzing the relationship between cognitive schemas and the manifestations of acute stress in patients admitted to the Clinical Department of Anesthesia and Intensive Care of the Emergency County Clinical Hospital of Târgu Mureș.

The objectives of the ascertaining research were:

1. Developing a psychodiagnostic strategy to identify the predominant cognitive schemas in patients admitted to intensive care and correlating them with the intensity of acute stress and the associated manifestations of anxiety and depression;
2. Determining the interdependence relationships (correlational analysis) between maladaptive cognitive schemas (operationalized through strategies such as catastrophizing, rumination, self-blame) and the intensity of emotional manifestations of stress, anxiety, and depression;

3. Analyzing the predictive value of maladaptive cognitive schemas on the severity of acute stress manifestations, in order to identify the cognitive mechanisms that catalyze the traumatic response within the intensive care environment;
4. Evaluating the impact of moderating variables (socio-demographic factors: age, sex, place of residence, educational level, and clinical factors: type of diagnosis, length of hospitalization) on the activation of cognitive schemas and on the severity of the overall clinical picture.

In accordance with the purpose and objectives of the research, we formulated the following **general hypothesis**: The prevalence of acute stress manifestations in patients admitted to the Clinical Department of Anesthesia and Intensive Care is significantly influenced by the rigidity of cognitive schemas, by the level of anxiety, depression, and stress, and by the application of specific psychological interventions, which can contribute to reducing symptomatology and increasing treatment compliance.

The general hypothesis allowed for the advancement of the following **specific hypotheses**:

Hypothesis 1: We assume the existence of significant positive correlations between the utilization of maladaptive cognitive schemas (catastrophizing, rumination, self-blame) and the intensity of stress, state anxiety, and depression symptomatology in hospitalized intensive care patients;

Hypothesis 2: We assume that patients admitted to the Clinical Department of ICU who exhibit maladaptive cognitive schemas and medium or high trait anxiety are more predisposed to developing an increased level of acute stress;

Hypothesis 3: We assume that cognitive schemas such as catastrophizing and rumination constitute significant predictors of acute stress intensity, explaining a significant proportion of the variance of clinical symptomatology.

To investigate the target variables within the ascertaining experiment, the research utilizes a mixed design, integrating qualitative and quantitative methods, which allow for capturing the complexity of the interaction between maladaptive cognitive structures and acute stress.

Quantitative methods – utilizing a battery of standardized psychometric tools:

The Cognitive Emotion Regulation Questionnaire (CERQ) - used to operationalize cognitive schemas through the lens of the 9 cognitive-emotional regulation strategies (e.g., catastrophizing, positive reappraisal). We consider that the CERQ assesses cognition in action, providing an accurate picture of real-time schema activation [22];

The DASS-21R scales - designed to measure negative emotional states across the dimensions of depression, anxiety, and stress. This instrument allows for a rigorous differential diagnosis between the physiological and psychogenic response;

The STAI-Y1 and STAI-Y2 inventories - essential for differentiating state anxiety (the reaction to the intensive care hospitalization context) from trait anxiety (the patient's structural vulnerability).

Complementarily, we resorted to **qualitative methods** to ensure **data triangulation**:

The semi-structured clinical interview - allowed for the exploration of defense mechanisms and the identification of seven major themes, ranging from the perception of loss of control to the psychological needs expressed (Theme 1 - perception of vulnerability and loss of control; Theme 2 - dominant emotional reactions; Theme 3 - dysfunctional cognitive schemas; Theme 4 - positive coping strategies; Theme 5 - negative coping strategies; Theme 6 - quality of perceived social and medical support; Theme 7 - expressed psychological needs). The thematic content analysis, conducted on a sample of N=100, utilized a mixed coding approach (deductive and inductive) to highlight the consistency of subjective experiences;

Clinical observation - targeted nonverbal behavior and spontaneous interactions, providing valuable clues about schemas of mistrust or helplessness that are not always verbalized.

Through the integration of these methods, the research design ensures high ecological validity, substantiating the transition from taxonomic assessment to a personalized intervention strategy within the critical care environment.

In **subchapter 2.2. Organization and conduct of the research on cognitive schemas and acute stress in hospitalized intensive care patients**, the ethical aspects, sample structure, and procedural stages are detailed.

Description of the sample and selection criteria - the research was conducted on a heterogeneous sample (Figure 2.1) of 100 adult patients, selected based on rigorous criteria: admission to the Clinical Department of ICU, consciousness state (Glasgow Coma Scale score of 15), absence of sedation, and integrity of cognitive functions. The demographic structure [33 women, 67 men; 49 urban, 51 rural; 17 patients (18-30 years), 21 (31-45 years), 28 (46-60 years), 27 (61-75 years), and 7 (over 75 years); 19 with lower secondary education, 19 with vocational studies, 38 with high school education, and 24 with higher education] and clinical structure (65% acute conditions, 35% chronic; 77% surgical cases) reflect the complexity of the intensive care environment's case mix.

Research stages - the research followed a sequential flow to ensure data triangulation:

Patient selection - selecting patients within the first 24 hours of admission to the Clinical Department of ICU, based on the study's inclusion and exclusion criteria.

Administration of quantitative psychometric tools - the questionnaires were administered individually by the doctoral candidate, a senior clinical psychologist employed within the Clinical Department of Anesthesia and Intensive Care of the Emergency County Clinical Hospital of Târgu Mureș.

Conducting the semi-structured interview - for the qualitative component.

Data processing - the analysis of the results was performed using advanced statistical methods to identify significant correlations between variables.

Implementation of the psychological intervention - for a selected subgroup of patients.

Post-intervention re-evaluation - repeating the psychological tests (excluding the administration of the STAI-Y2 trait scale).

Integrated analysis of quantitative and qualitative data.

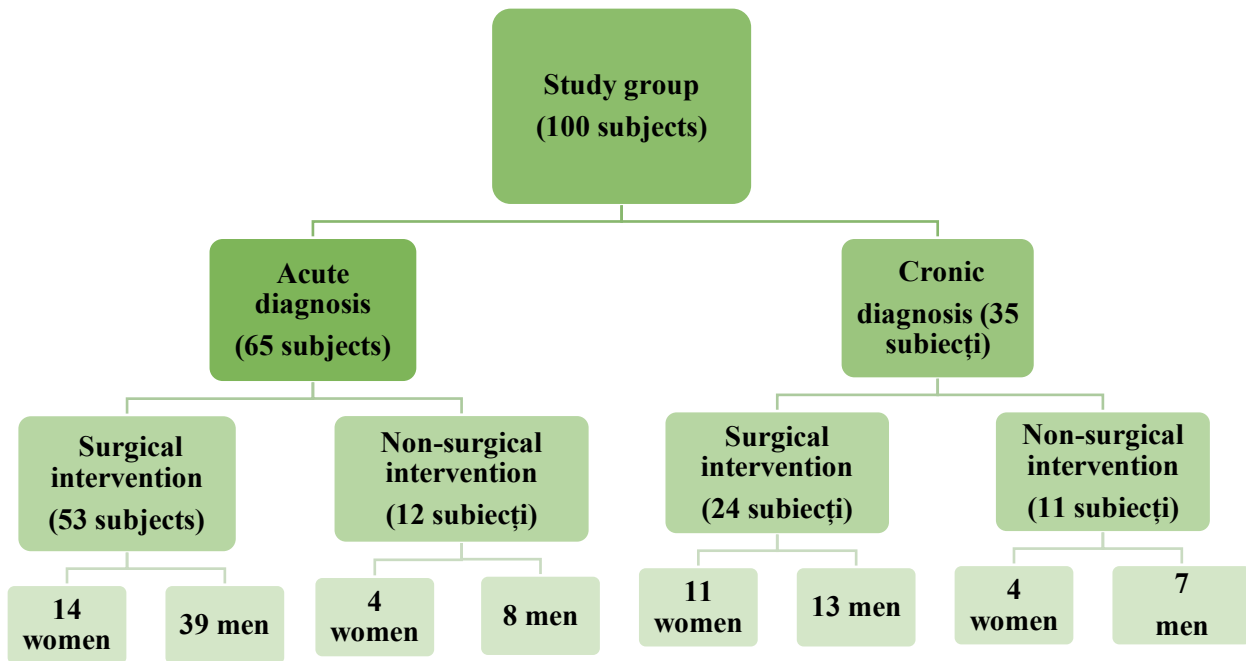


Figure 2.1 Composition of the subject group evaluated between 2022 and 2025

Subchapter 2.3. Presentation and interpretation of quantitative research results, exposes the analysis of data processed using the IBM SPSS Statistics software (v. 21). The statistical methodology included correlational tests (Pearson/Spearman), comparative tests (t-test, ANOVA), and multiple regression analysis. This mixed analytical methodology allowed for the identification of complex interaction models between psychological factors and the intensive care context, providing a rigorous perspective on the mechanisms that maintain acute stress.

Main results of the comparative analysis:

Homogeneity of the emotional response - the analysis of affective dimensions (DASS-21R, STAI-Y) reveals a uniformity of symptomatology, independent of the gender variable. Contrary to the general literature, within the context of intensive care hospitalization, gender does not constitute a predictive factor for stress severity ($p > 0.05$).

The intensive care environment as an equalizing factor - the data demonstrate that the severity of the acute clinical context prevails over socio-demographic variables. The critical environment acts as an *affective equalizer*, triggering severe levels of anxiety and activating maladaptive coping mechanisms (catastrophizing, rumination) in both sexes, a fact that necessitates a therapeutic approach focused on the specifics of the crisis situation, beyond the demographic profile.

Within **subchapter 2.4. Analysis of the relationship between cognitive schemas and the manifestation of acute stress in patients admitted to intensive care units**, the mediating role of coping strategies on the subjective experience of trauma is investigated.

Analysis of correlations between psychological variables - the results of the Spearman test confirm a robust interconnection between the dimensions of psychological

stress: strong correlations between anxiety and stress ($\rho=0.537$, $p<0.001$) and between anxiety and depression ($\rho=0.557$, $p<0.001$), thereby validating the multidimensional nature of the acute stress response within intensive care units.

Validation of the regression model - the multiple regression analysis demonstrates the high predictive power of cognitive schemas over the clinical picture, with the models being highly statistically significant ($p<0.001$). The global significance of the models is presented in the table below:

Table 2.4 Global significance indicators and explained variance (R2)

Dependent Variable	R2 (Variance)	F (df1,df2)	p-value
Depression (DASS-21R)	.541 (54.1%)	F(9,90)=11.791	<.001
State Anxiety (STAI-Y1)	.499 (49.9%)	F(9,90)=9.975	<.001
Anxiety (DASS-21R)	.455 (45.5%)	F(9,90)=8.358	<.001
Trait Anxiety (STAI-Y2)	.432 (43.2%)	F(9,90)=7.616	<.001
Stress (DASS-21R)	.326 (32.6%)	F(9,90)=4.839	<.001

The specific role of cognitive schemas (predictors) – the analysis of standardized Beta coefficients highlights the dual role of CERQ strategies:

Risk factors - catastrophizing is the primary predictor for state anxiety ($\beta=0.419$), while self-blame exerts the greatest influence on trait anxiety ($\beta=0.355$).

Protective factors - positive refocusing (REF) is confirmed as the most robust protective factor against depression ($\beta=-0.501$) and stress ($\beta=-0.359$).

The synthesis of standardized Beta coefficients (β) and explained variance (R2) for the multiple regression models is exemplified in Table 2.5:

Table 2.5 Synthesis of standardized Beta coefficients (β) and explained variance (R2) for multiple regression models

CERQ Strategies	Stress (DASS-21R)	Anxiety (DASS-21R)	Depression (DASS-21R)	State Anxiety (STAI-Y1)	Trait Anxiety (STAI-Y2)
REF	-0.359	-	-0.501	-0.291	-0.208
ACC	-0.253	0.006	0.218	-0.078	0.259
CAT	-0.089	-	0.054	0.419	-0.038
CULP	0.184	-	0.101	0.206	0.355
PLAN	0.082	-	-0.159	-0.074	-0.348
AUTO	0.197	0.171	0.027	0.019	0.153
RUM	0.181	0.019	0.045	-0.034	0.069
Variance (R2)	32.6%	45.5%	54.1%	54.1%	43.2%

The interpretation of the data supports the necessity of a psychological intervention focused on restructuring catastrophizing and stimulating positive refocusing to diminish the traumatic impact of intensive care hospitalization.

In **subchapter 2.5. Integration of qualitative results**, the qualitative analysis methodology utilized to complement the quantitative data with a subjective and

contextual perspective on patients' experiences is presented [16]. This stage aimed to explore in depth the perceptions, experiences, and personal coping mechanisms regarding acute stress generated by admission to the intensive care unit. The primary data collection methods were the *semi-structured clinical interview* and *clinical observation*.

Data triangulation and validation of results - the integration of clinical observations allowed for the validation of the information obtained through psychometric instruments [19]. Evaluating nonverbal behavior and the dynamics of social interaction facilitated the identification of latent cognitive schemas (such as helplessness or mistrust) that are not always explicitly verbalized. This qualitative approach provided depth to the analysis, transforming the sample's psychological profile into a solid foundation for the development of the personalized intervention program.

Based on the results obtained from the conducted research, the following ideas were formulated in **subchapter 2.6. Conclusions to Chapter 2:**

1. Acute stress is a prevalent and intense reality in intensive care. Patients admitted to the Clinical Department of Anesthesia and Intensive Care face significant levels of acute stress, anxiety, and depression, highlighting an urgent need for specialized psychological interventions.
2. Maladaptive cognitive schemas significantly predispose to acute stress manifestations. It was demonstrated that maladaptive thinking patterns play an essential role. Catastrophizing, rumination, and blaming others are not merely associated, but manifest as powerful statistical predictors of increased levels of anxiety and depression, as well as acute stress.
3. Adaptive coping strategies act as protective factors. The study confirmed the essential role of strategies such as positive refocusing, refocusing on planning, and adaptive acceptance, which exhibit a statistically significant inverse correlation with acute stress levels. These strategies contribute to maintaining psychological balance, even within an extremely challenging context.
4. The type of medical intervention differentially influences acute stress. An important observation within the studied patient cohort is that patients receiving non-surgical treatment are significantly more predisposed to anxiety and depression compared to those undergoing surgical intervention. The environment of residence is a vulnerability factor. Patients coming from rural areas report a significantly higher level of acute stress in intensive care. The experience of intensive care hospitalization is fundamentally marked by vulnerability and loss of control. The qualitative data emphasized that the acute perception of vulnerability and loss of control is a central theme and a fundamental factor explaining the intensity of the emotional stress experienced by patients within the intensive care environment.
5. The need for support and the importance of psychological backing are vital. The qualitative themes clearly highlighted the vital role of perceived social and medical support, as well as of unmet psychological needs (information, control, human presence). These aspects provide concrete directions for developing personalized and effective psychological interventions.

Chapter 3. Mitigating acute stress in hospitalized patients within the Clinical Department of Anesthesia and Intensive Care through the Cognitive and Emotional Support Program in ICU (SCE-ATI) presents the results of the formative psychological intervention program implemented for patients admitted to the Clinical Department of Anesthesia and Intensive Care of the Emergency County Clinical Hospital of Târgu Mureș. The **central objective** was to facilitate cognitive and emotional adaptation by reducing acute stress and increasing the flexibility of maladaptive cognitive schemas.

In **subchapter 3.1. Organization, description, and implementation of the SCE-ATI formative experiment**, the SCE-ATI program is defined as a preventive intervention within the *critical window* of 30 days post-trauma, aiming to interrupt the trajectory toward post-traumatic stress disorder. The justification for this endeavor resides in the fact that acute stress in intensive care is not merely psychological suffering, but a neuroendocrine hyperactivation factor that blocks biological recovery.

The intervention adopts an integrative-strategic model, acting synergistically through techniques from:

Psychodrama - for the externalization and reprocessing of traumatic mental images that are *frozen* and inaccessible to purely rational dialogue;

Palo Alto brief systemic-strategic therapy - through the technique of reframing, transforming aversive stimuli (e.g., medical monitoring) from danger signals into external safety systems;

Systemic family therapy - facilitating cognitive decentering and the regaining of control through the externalization of the illness and the activation of resilience resources.

The integration of these techniques is supported by the integrative-strategic psychotherapy model (Popescu, 2021) [6], which promotes the flexible use of experiential, systemic, and cognitive methods. This choice is congruent with the recommendations of the practical Guide "Integrated Psychological Intervention" (IPI, Chișinău, 2025) [8], which emphasizes the effectiveness of brief psychological interventions tailored to medical crisis contexts.

The purpose of this research stage consists in developing and validating the Cognitive and Emotional Support Program in ICU (SCE-ATI) to mitigate acute stress by facilitating emotional coping and increasing the flexibility of maladaptive cognitive strategies, aiming not only at reducing subjective symptomatology but also at stabilizing the organism's psycho-physiological reaction to illness within the 30-day critical intervention window.

Starting from this purpose, the **specific objectives** of the experimental study are:

1. Designing, developing, and implementing the Cognitive and Emotional Support Program in ICU (SCE-ATI), adapted to the patient's bedside and grounded in the integrative-strategic model (reframing, experiential, and systemic techniques), aiming to modify the cognitive processing of the critical situation under the pressure of the invasive medical factor;

2. Measuring and analyzing the flexibilization of maladaptive cognitive processes (e.g., rumination, catastrophizing, self-blame), evaluated via the CERQ cognitive-

emotion regulation questionnaire, considered expressions of maladaptive cognitive schemas within a context of intense stress;

3. Validating the efficacy of the Cognitive and Emotional Support Program in ICU (SCE-ATI) in reducing the intensity of anxiety states and stress reactivity (measured via STAI-Y and DASS-21R) by optimizing cognitive regulation mechanisms in patients from the experimental group compared to the control group;

4. Validating the mechanism of change, specifically the relationship between modifications at the level of cognitive coping strategies (Objective 2) and the improvement of clinical symptomatology measured via DASS-21R and STAI-Y (Objective 3).

Main hypothesis: The implementation of the integrative-strategic psychological Cognitive-Emotional Support Program in ICU (SCE-ATI) will produce a modification of the maladaptive cognitive mechanisms that underlie acute stress reactivity. It is presumed that at the end of the program (T2), patients in the experimental group will exhibit significantly lower scores in maladaptive coping strategies (catastrophizing, rumination, self-blame, and blaming others) and significantly higher scores in adaptive coping strategies (particularly acceptance, positive reappraisal, and refocus on planning), evaluated via the CERQ questionnaire, compared to the control group.

Working hypotheses:

Hypothesis 1: As a consequence of modifying maladaptive cognitive mechanisms (operationalized through cognitive-emotional coping strategies), experimental group patients will exhibit a significant reduction in the emotional and physiological manifestations of acute stress at T2, reflected in significantly lower scores on the stress, anxiety, and depression scales (measured via DASS-21R) and on state anxiety (measured via STAI-Y1), compared to the control group;

Hypothesis 2: The SCE-ATI program will diminish the intensity of the acute stress impact. At the end of the monitoring period, a significantly larger percentage of patients in the experimental group will exhibit a progression from high severity levels (scores above average thresholds on the DASS-21R scales) toward low/normal intensity levels, compared to the control group;

Hypothesis 3: The magnitude of the reduction in acute stress manifestations will be directly proportional to the degree of cognitive flexibilization. Within the experimental group, the decrease in scores for maladaptive cognitive coping strategies (particularly catastrophizing and rumination) from T1 to T2 will correlate positively and significantly with the decrease in scores for emotional stress and state anxiety (measured via DASS-21R-stress and STAI-Y1).

Methodology of the formative experiment - this stage of the research was designed as a formative-applied endeavor, meant to test the efficacy of an original psychological intervention protocol within the restrictive environment of intensive care. The design utilized was a randomized controlled trial (RCT) on a sample of 50 participants (from the initial cohort of 100). Simple randomization allowed for an equal division of the sample into the experimental group (n=25), receiving the SCE-ATI program, and the control group (n=25), which received standard monitoring only. Methodological rigor was ensured through the use of strict inclusion criteria (Glasgow

Coma Scale score of 15, absence of psychiatric pathologies) and robust statistical processing. Given the non-normal distribution of the data (Shapiro-Wilk, $p < 0.05$), non-parametric tests were used: Mann-Whitney U test (inter-group comparison), Wilcoxon signed-rank test (intra-group T1-T2 analysis), and the Spearman coefficient (ρ) to validate the causal link between coping flexibilization and acute stress mitigation.

The assessment was multi-method, utilizing the clinical interview to confirm the DSM-5 criteria for exposure to a traumatic event, intrusive, dissociative, and avoidance symptoms, alongside standardized psychometric batteries. The instruments used (CERQ for cognitive-emotional coping, DASS-21R for stress, anxiety, and depression, STAI-Y1 for state anxiety) allowed for a fine-grained monitoring of the change process. This methodological rigor ensures that the results obtained are not the product of chance, but the direct consequence of the cognitive resignification process induced through the SCE-ATI program, providing a solid foundation for generalizing the conclusions within clinical hospital psychology practice.

Theoretical foundations and core principles of the intervention

The SCE-ATI program is grounded in the biopsychosocial framework (Engel, 1977) and Lazarus and Folkman's transactional model (1984). The central pillar is represented by cognitive schema theory (Young, 2003), which allows for an understanding of how dysfunctional patterns (such as catastrophizing or vulnerability) are activated by the critical environment, fueling rumination and the alert response. Due to the specific conditions of hospitalization (isolation, physical limitations), the cognitive-behavioral core was enriched with techniques from brief crisis interventions (Caplan, 1964), psychodrama (Moreno), systemic therapy (Minuchin), and the Palo Alto strategic approach (Watzlawick et al., 1974). This theoretical synthesis ensures a holistic approach, aiming not only at the mitigation of clinical symptoms but also at the resignification of how the patient processes traumatic information, transforming the hospitalization experience from a vital threat into a process of active recovery and resilience.

The *core principles of the program* include: reducing stress perception by modifying maladaptive mechanisms, developing adaptive coping through positive reappraisal, increasing the sense of control and safety within a chaotic environment, and preventing post-traumatic chronicity.

Design, program structure, and stages of the psychological intervention

The structure of the SCE-ATI program is dynamic, being implemented through daily individual sessions at the patient's bedside. The process followed three progressive stages.

Stage 1 (days 1–3) focused on the initial assessment and the building of the therapeutic alliance, an essential process for establishing a relationship of trust within the first 72 hours of admission. The comprehensive assessment (T1) allowed for the identification of the cognitive vulnerability profile (e.g., the prevalence of rumination) upon which the personalized plan was constructed.

Stage 2 (days 3–30) represented the formative core, consisting in the application of strategic reframing techniques to modify the meaning of aversive stimuli, the use of verbal psychodrama to externalize traumatic images, and the application of circular questions to facilitate cognitive decentering.

Stage 3 (the final 1–2 days) was dedicated to consolidating gains and the final evaluation (T2). The emphasis was placed on activating transgenerational resources and on the positive reappraisal of the critical experience, preventing the crystallization of acute stress into chronic structures.

The program was organized modularly:

Module I for hospitalizations under 7 days (reducing state anxiety and catastrophizing);

Module II for hospitalizations between 7–14 days (reducing rumination and self-blame);

Module III for hospitalizations between 15–30 days (combating helplessness and reconstructing meaning).

This staging ensures that the intervention is constantly calibrated to the psychological and energetic needs of the patient, offering continuous and adaptable support throughout their clinical evolution, considering the diversity of pathologies and hospitalization times in intensive care.

The monitoring of progress was likewise adapted to the rhythm of the hospitalization, with daily informal re-evaluations or periodic formal assessments, allowing for real-time adjustments of the techniques. Personalization also included adapting techniques to physical limitations (e.g., using verbal psychodrama instead of action psychodrama). The results demonstrate that this modular flexibility was essential for capturing how cognitive schemas modify under the pressure of time, ensuring an effective resignification of the traumatic experience regardless of the type of trauma (acute, existential, or systemic) and offering a clinical solution adapted to the harsh reality of intensive care.

Specific content and techniques utilized in the psychological intervention sessions

The content of the sessions was organized across three major components:

The psychoeducation and emotional stabilization component aimed at validating the subjective experience and providing a logical meaning to the physiological state (emotional literacy), reducing unpredictability and the sensation of losing control.

The strategic-cognitive component utilized techniques such as Palo Alto *strategic reframing*, transforming aversive stimuli (the noise of monitors) from danger signals into vital safety indicators. Externalization through *inner monologue* and the *double technique* from psychodrama facilitated distancing from the rumination process, allowing the patient to treat the illness as an entity external to their identity ("Fear is something I have, not something I am").

The physiological regulation and anchoring component utilized *diaphragmatic breathing* techniques to activate the parasympathetic nervous system and *grounding exercises* (5-4-3-2-1) to halt mental intrusions. Ericksonian-type *guided imagery* was used to provide the psychological system with temporary distance from the invasive environment of the ward by visualizing a safe place. The setting of concrete *micro-objectives* helped combat learned helplessness, restoring the patient's sense of self-efficacy. These techniques, applied in a logical order, directly targeted the cognitive mechanisms that fuel acute stress, providing patients with practical tools for managing suffering and facilitating the transition from guilt schemas to the positive reappraisal of the healing process.

Illustration of the therapeutic process through case studies

The effectiveness of the program was substantiated through **8 case studies** (Appendix 21), which illustrate the modular implementation of the SCE-ATI program across different clinical profiles: acute or chronic conditions, with surgical or non-surgical therapeutic approaches, correlated with distinct hospitalization periods.

Module I was illustrated through the case of I.D. (electrocution accident), where rapid trauma resignification blocked the escalation of catastrophizing, its score decreasing from 16.00 to 10.04 ($p < 0.001$).

Module II was exemplified through the case of M.P. (amputation), where psychodramatic techniques of role exploration facilitated an increase in positive reappraisal and a reduction in depressive symptomatology (DASS-21R-depression decreasing from 27.84 to 17.92).

Module III was illustrated through the case of patient C.A.C. (tetraparesis), where the resignification of the relationship with the medical team reduced the blaming of others ($p = 0.004$) and unlocked internal planning resources.

These case studies demonstrate that the SCE-ATI program ensures effective resignification regardless of the clinical profile. Correlating the statistical significance index with qualitative observations confirms the program's flexibility in transforming the intensive care unit experience from a space of trauma into one of recovery. The results are in consonance with international literature that emphasizes the importance of a coherent narrative of the critical experience to prevent post-traumatic stress disorder.

The original contribution resides in the validation of an integrative-strategic model that directly targets the replacement of maladaptive cognitive patterns through resignification, grounded in a systemic philosophy and experiential techniques, offering a concrete clinical solution for an extremely complex problem.

Subchapter 3.2. Analysis of the results of the formative program implementation, reveals the dynamics of the therapeutic process and the necessity of constantly adapting the psychological toolkit to the patient's biological state.

The ***analysis of the therapeutic process*** highlights a nuanced impact of the methods utilized:

The *double* unlocked the resignification process during moments of extreme exhaustion, yet was perceived as intrusive by patients with a high need for autonomy;

The *mirror* activated the healthy parts of the self, but was ineffective during phases of severe denial;

The *imaginary role-reversal* facilitated the resignification of the relationship with the family, but could not be utilized with patients whose executive functions were impaired by sedation;

Guided imagery allowed for distancing from the traumatic environment, but induced panic in hypervigilant patients who felt the need to visually monitor the equipment;

Strategic reframing was the pivot for managing catastrophizing, but its logic could not pierce biological urgency during moments of acute physical pain;

Breathing techniques induced calmness, but could increase anxiety in patients with severe dyspnea;

Jacobson relaxation proved to be the most problematic technique, activating the pain map due to catheters, and was constantly replaced by autogenic training.

Adaptation to the clinical setting required redefining the psychologist's posture (shifting from the classical seated position to a *visual shield* posture - standing intervention) and constructing a *sonic cocoon* to protect confidentiality.

In conclusion, the corroboration of the data demonstrates that an integrative approach focused on the resignification of cognitive patterns significantly reduces acute stress. The SCE-ATI program thus offers an intervention model that is not only statistically effective but also humanized, adapted to the physiological reality of the patient within intensive care units.

In **subchapter 3.3. Conclusions to Chapter 3**, the final results of the implementation of the SCE-ATI program are presented, highlighting its effectiveness in reducing acute stress manifestations and optimizing coping mechanisms. The comparative pre-test/post-test analysis confirmed the attainment of the research objectives:

1. Optimization of cognitive-emotional coping - the program facilitated the transition from a dysfunctional profile (based on catastrophizing and rumination) to an adaptive one, centered on active acceptance and planning. The intervention transformed the perception of the critical care environment from a paralyzing threat into a psychologically manageable clinical situation.
2. Reduction of clinical symptomatology - the decrease in stress, anxiety, and depression represents the direct consequence of the resignification process. The program succeeded in stabilizing the extreme alert response (state anxiety) and extracting the majority of participants from the zone of symptomatic severity, thereby preventing the chronicity of trauma.
3. Validation of the causal mechanism - the empirical data confirm that the improvement of the patient's state is directly conditioned by the modification of deep cognitive schemas. The correlation between coping optimization and the decrease in stress manifestations validates cognitive resignification as the central engine of psychological recovery within intensive care units.
4. Methodological and applied value - the success of the Cognitive and Emotional Support Program in ICU (SCE-ATI) substantiates the necessity of integrating psychological assistance as a standard of care within critical care medicine units. The program proved to be a flexible tool capable of responding to patients' physiological limitations, offering a rigorous methodology applied directly at the patient's bedside.
5. In conclusion, the comprehensive validation of the hypotheses demonstrates that intervening upon maladaptive cognitive schemas through resignification methods constitutes a viable solution for managing medical trauma, offering a model of best practices for contemporary clinical psychology.

GENERAL CONCLUSIONS AND RECOMMENDATIONS

The present research contributes to solving a current scientific problem within the field of psychology regarding the extent to which cognitive structures influence the manifestation of acute stress in hospitalized intensive care patients, and the methodology for integrating these mechanisms into the design of personalized psychological interventions. Through the obtained results, this work demonstrates that identifying cognitive vulnerabilities allows for the development of psychological intervention strategies capable of facilitating the adaptation and recovery of critically ill patients.

In accordance with the purpose of the research, the theoretical-experimental endeavor led to the identification and rigorous analysis of the relationship between the particularities of cognitive schemas (operationalized through cognitive-emotional coping strategies) and the manifestations of acute stress. Furthermore, the research culminated in the development, implementation, and validation of the efficacy of the SCE-ATI integrative-strategic psychological intervention program (Cognitive-Emotional Support Program in ICU), demonstrating its potential to modify maladaptive cognitive schemas and significantly diminish acute stress symptomatology.

Based on the achieved objectives, the following main scientific results were derived, confirming the validation of the research hypotheses:

1. Substantiating the relationship between cognitive schemas and acute stress in intensive care units – the theoretical and empirical analysis demonstrated that the traumatic impact of critical care hospitalization is mediated by cognitive-emotional regulation mechanisms. It was established that the intensive care environment acts as an activator of maladaptive cognitive schemas, transforming isolation and vital threat into re-experiencing and hypervigilance symptoms, a fact that extends the theoretical framework of medical trauma psychology.
2. Identifying the predictive role of maladaptive cognitive strategies – the results of the ascertaining stage revealed that catastrophizing, rumination, and blaming strategies function as major predictors of psychological distress, correlating significantly with high levels of anxiety, stress, and depression. This result clarifies how information processing amplifies perceived danger, providing precise indicators for clinical screening and early intervention.
3. Developing and validating the SCE-ATI intervention model – designing and testing the Cognitive-Emotional Support Program in ICU (SCE-ATI) demonstrated high statistical efficiency in reducing acute stress manifestations in patients within the experimental group compared to the control group. The result attests that a structured intervention, configured as a modular protocol, is essential for the psychoemotional stabilization of the critical patient, representing an element of novelty and originality for the national and regional academic landscape.
4. Demonstrating the impact of resignification on adaptive resources – the formative experiment confirmed that replacing maladaptive mechanisms with strategies based on resignification, planning, and acceptance constitutes the engine of clinical change. This result demonstrates that therapeutic success is conditioned by methodological flexibility and the adaptation of techniques to the patient's somatic and psychological state, offering distinct applied value for clinical psychology services.
5. Substantiating the necessity of psychological support as a standard of care – the research validates the integrative-strategic model that correlates cognitive variables with contextual ones, demonstrating that early psychological assistance, provided directly at the patient's bedside, optimizes resilience resources. This result substantiates the necessity of integrating the psychologist into the multidisciplinary team of intensive care units to prevent long-term post-traumatic disorders.

In the context of the presented conclusions, the obtained results confirm the research hypotheses and validate the scientific novelty, as well as the theoretical and applied value of the study.

Scientific novelty and originality of the work consists in:

1. Identifying the relationship between the particularities of maladaptive cognitive schemas and the manifestations of acute stress in hospitalized intensive care patients, demonstrating the role of cognitive strategies in wedding/mediating psychological reactions to medical trauma.
2. Developing an integrative-strategic model that correlates cognitive, emotional, and contextual variables in explaining acute stress in critically ill patients.
3. Designing and validating the SCE-ATI psychological intervention program as a modular protocol adapted to the specific nature of the intensive care environment.

Theoretical value of the research - the research achieved a theoretical synthesis regarding the relationship between the particularities of maladaptive cognitive schemas and acute stress, integrating perspectives from cognitive psychology, trauma psychology, and medical psychology. The study contributes to clarifying the role of cognitive-emotional regulation strategies within the context of critical care hospitalization and extends the theoretical framework of psychological interventions in the intensive care environment.

Applied Value of the Research

It consists in the development of the SCE-ATI program, an integrative-strategic psychological intervention model designed for patients hospitalized in intensive care units. The program can be implemented in medical facilities and clinical psychology services, contributing to the reduction of acute stress, the activation of adaptive coping strategies, and the prevention of post-traumatic disorders.

Recommendations for implementation

1. Introducing cognitive screening using instruments such as the CERQ to identify patients with cognitive vulnerabilities.
2. Integrating the psychologist into the multidisciplinary team within intensive care units to ensure the cognitive-emotional support of patients.
3. Implementing interventions oriented toward increasing the patient's perceived control over the hospital environment.
4. Applying a systemic approach by facilitating communication with the family as a protective factor against reactive depression.

Study limitations and future research directions - although the objectives were achieved, the research presents certain limitations that can be transformed into opportunities for subsequent studies:

1. The relatively small sample size and its origin from a single clinical center limit the generalizability of the results.
2. The research targeted the acute period of hospitalization, without evaluating long-term evolution.

It is recommended to conduct longitudinal studies to evaluate the risk of post-traumatic stress disorder at 6 and 12 months post-discharge. Additionally, an innovative direction would be to correlate psychological markers with biological indicators of stress (such as cortisol levels or heart rate variability) for an extended biomedical validation of the cognitive resignification process.

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Ranking: Q1 (Web of Science). Impact Factor: 4.7 (2022).

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2. SUCIAGHI, Mariana. *Separation Anxiety*. In: *Journal of Psychiatry and Psychiatric Disorders*. 2022, vol. 6, no. 5, pp. 263-267. Journal article. DOI: 10.26502/jppd.2572-519X0171. ISSN: 2572-519X. Electronic repository: <https://doi.org/10.26502/jppd.2572-519X0171>.
Category: B+ (ANACEC). Impact Factor: 3.3.
3. SUCIAGHI, Mariana. *Pacientul critic între cultură, identitate și cogniție: O perspectivă psihologică asupra schemelor cognitive și stresului acut la pacienții internați la terapie intensivă* [The critical patient between culture, identity, and cognition: A psychological perspective on cognitive schemas and acute stress in hospitalized intensive care patients]. In collective volume: *Culture, Globalization and Intercultural Perspectives. Communication, Journalism, Education Sciences, Psychology and Sociology*. Târgu Mureș, Romania: Arhipelag XXI Press, May 17, 2025, pp. 136–144. Edited by: The Alpha Institute for Multicultural Studies. ISBN: 978-606-8624-23-5. Electronic repository: <https://asociatia-alpha.ro/gidni/12-2025/GIDNI-12-Comm-f.pdf>
4. SUCIAGHI, Mariana. *Methodological aspects of acute stress in intensive care patients*. In collective volume: *Reading Communication in Postmodernity. Discourses and Social Perspectives – 8th Edition*. Târgu Mureș, Romania: Arhipelag XXI Press, 2024, pp. 93-98. Edited by: The Alpha Institute for Multicultural Studies. ISBN: 978-606-8624-08-2. Electronic repository: <https://www.researchgate.net/publication/395547391>
5. SUCIAGHI, Mariana. *Suportul psiho-emoțional al persoanelor cu dizabilități spitalizate la terapie intensivă* [Psycho-emotional support for hospitalized persons with disabilities in intensive care units]. In collective volume: *Protecția drepturilor persoanelor cu dizabilități: abordări multidisciplinare* [Protection of the rights of persons with

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6. SUCIAGHI, Denis; SUCIAGHI, Mariana; RADULY, Gergo; MORARIU, Mihai Raul; FODOR, Raluca Ştefania. *The dynamics of organ donation in the Anesthesia and Intensive Care Clinic of Târgu-Mureş County Emergency Clinical Hospital*. In: *Acta Marisiensis – Seria Medica* (George Emil Palade University of Medicine, Pharmacy, Science, and Technology of Târgu Mureş, Romania). 2026 – extended article – *in press*. Electronic repository: <https://actamedicamarisiensis.ro/>

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2.1. In proceedings of scientific events included in other databases accepted by anacec

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13. **SUCIAGHI, Mariana.** *Evaluarea psihologică a dimensiunilor psihoemoționale ale pacienților în stare critică, internați în secția de terapie intensivă.* [Psychological assessment of the psychoemotional dimensions of critically ill patients admitted to the Intensive Care Unit]. In conference proceedings: *Patrimoniul cultural de ieri – implicații în dezvoltarea societății durabile de mâine* [Yesterday's Cultural Heritage – Implications for the Development of Tomorrow's Sustainable Society] – 8th Edition, 2023. Iași – Chișinău – Lviv, pp. 564-571. ISSN: 2558-894X. DOI: <https://doi.org/10.5281/zenodo.8397443>
14. **SUCIAGHI, Mariana; TARNOVSCHI, Ana.** *Cognitive schemas and their role in the manifestation of acute stress.* In scientific article collection: National Scientific Conference with International Participation "Integration through Research and Innovation", dedicated to the International Science Day for Peace and Development, November 6-7, 2025: *Culegere de articole științifice / Scientific committee: Igor Șarov [et al.].* – Chișinău: [S. n.], 2025 (CEP USM). Social Sciences. – 2025. – 1095 p. State University of Moldova, HR Excellence in Research. ISBN: 978-9975-62-990-4 (PDF), pp. 360-367. CZU: 159.944.4:615.851.1. DOI: <https://doi.org/10.59295/spd2025s.48>
15. **SUCIAGHI, Mariana; TARNOVSCHI, Ana.** *Factorii psihologici implicați în decizia familiilor privind donarea de organe.* [Psychological Factors Involved in Families' Decisions Regarding Organ Donation]. Conference abstract in volume: *Abstracts of the XVI National Conference of the Romanian Psychological Association*, organized in Chișinău, Republic of Moldova by the State University of Moldova, June 6-8, 2025: *Culegere de articole științifice/ Scientific committee: Igor Șarov [et al.].* – Chișinău: [S. n.], 2025 (CEP USM). CZU: 3(082)=135.1=111=161.1 I-58. ISBN: 978-9975-62-687-3. Electronic repository: <https://doi.org/10.59295/spd2025s>
16. **SUCIAGHI, Mariana.** *Evaluarea psihologică a dimensiunilor psihoemoționale ale pacienților în stare critică, internați în secția clinică de terapie intensivă.* [Psychological assessment of the psychoemotional dimensions of critically ill patients admitted to the Clinical Department of Intensive Care]. Conference abstract in volume: *Patrimoniul cultural de ieri – implicații în dezvoltarea societății durabile de mâine* [Yesterday's Cultural Heritage – Contribution to the Development of Tomorrow's Sustainable Society] – 7th Edition. Chișinău, Republic of Moldova, February 9-10, 2023, pp. 161-162. CZU: 159.942.07:614.253.8]:616-036.81. Published April 14, 2023.

ADNOTARE

Suciaghi, Mariana. Particularități ale schemelor cognitive și manifestarea stresului acut la pacienții din terapie intensivă.

Teză de doctor în psihologie. Chișinău, 2026

Structura tezei: lucrarea conține adnotări în limbile română, engleză și rusă, introducere, 3 capitole, concluzii generale și recomandări, bibliografie din 177 titluri, 21 anexe, 141 pagini text de bază, 9 figuri și 15 tabele. Rezultatele obținute sunt publicate în lucrări științifice, dintre care 12 articole extinse (9 în reviste științifice și 3 în volume ale manifestărilor științifice) și 4 rezumate ale comunicărilor științifice.

Cuvinte-cheie: scheme cognitive, stres acut, anxietate, depresie, strategii de coping, terapie intensivă, intervenție psihologică.

Scopul lucrării: constă în identificarea și analiza relației dintre particularitățile schemelor cognitive (abordate prin prisma strategiilor de coping cognitiv-emoțional) și manifestările stresului acut la pacienții spitalizați în unitățile de terapie intensivă și în elaborarea, implementarea și validarea eficacității unui program de intervenție psihologică integrativ - strategic (SCE-ATI) destinat modificării schemelor cognitive dezadaptative și diminuării manifestărilor stresului acut, în scopul facilitării procesului de adaptare și recuperare a pacienților aflați în stare critică.

Obiectivele cercetării: (1) Sinteza literaturii de specialitate privind fundamentele teoretice și empirice ale stresului acut în context medical critic (2) Identificarea mecanismelor cognitive dezadaptative și a particularităților psihoafective ale pacienților cu stres acut internați în secțiile de terapie intensivă; (3) Selectarea și utilizarea unui instrumentar de psihodiagnostic pentru evaluarea strategiilor de coping cognitiv-emoțional și a manifestărilor stresului acut.; (4) Analiza corelațională și predictivă a relației dintre schemele cognitive dezadaptative (operaționalizate prin strategiile de reglare cognitiv-emoțională) și intensitatea manifestărilor stresului acut la pacienții internați în secția de terapie intensivă. (5) Proiectarea și implementarea Programului psihologic integrativ-strategic de Suport Cognitiv și Emoțional în ATI (SCE-ATI); (6) Validarea eficacității Programului SCE-ATI în reducerea manifestărilor stresului acut prin optimizarea mecanismelor cognitive dezadaptative la pacienții internați în secția de terapie intensivă.

Noutatea științifică și originalitatea lucrării: reprezintă un demers inovator în spațiul academic care investighează sistematic și validează empiric un model integrativ-strategic al manifestărilor stresului acut la pacienții internați în terapie intensivă. La nivel teoretic, studiul demonstrează rolul predictiv al schemelor cognitive dezadaptative în dinamica stresului acut la pacienții internați în secții de terapie intensivă. La nivel aplicativ, noutatea absolută o constituie elaborarea și validarea Programului psihologic de Suport Cognitiv și Emoțional în ATI (SCE-ATI), oferind specialiștilor un model integrat de evaluare și intervenție psihologică, adaptabil la vulnerabilității pacientului critic, rezultatele confirmând eficiența individualizării suportului psihologic în raport cu limitele fiziologice și nevoile psiho-emoționale ale pacienților critici.

Rezultatele obținute care contribuie la soluționarea problemei științifice: s-a demonstrat statistic eficacitatea programului, participanții la studiu înregistrând reduceri semnificative ale stresului, anxietății și depresiei comparativ cu grupul de control. Totodată, a fost confirmat empiric modelul teoretic al cercetării, prin evidențierea rolului schemelor cognitive dezadaptative (operaționalizate prin mecanisme de coping, precum: catastrofare, ruminare, culpabilizare) în generarea și menținerea stresului acut.

Valoarea teoretică a cercetării: cercetarea fundamentează un model explicativ privind rolul predictor al schemelor cognitive dezadaptative în dinamica stresului acut la pacienții din terapie intensivă, evidențiind relația dintre structurile cognitive profunde și mecanismele de adaptare în situații de amenințare vitală. Rezultatele contribuie la extinderea cunoașterii privind funcționarea schemelor cognitive în condiții de stres major.

Valoarea aplicativă a cercetării: lucrarea validează Programul de Suport Cognitiv și Emoțional în ATI (SCE-ATI), oferind un model integrat de evaluare și intervenție psihologică pentru pacienții critici. Rezultatele susțin necesitatea integrării suportului psihologic individualizat ca standard de îngrijire în terapie intensivă.

Implementarea rezultatelor științifice: rezultatelor se realizează prin aplicarea programului în unitățile de terapie intensivă, diseminarea academică, fundamentarea ghidurilor de bună practică și utilizarea SCE-ATI ca material de formare pentru psihologi și personalul medical.

ABSTRACT

Suciaghi, Mariana. Characteristics of cognitive schemas and the manifestation of acute stress in intensive care patients.

Doctoral dissertation in psychology. Chişinău, 2026

Thesis structure: the work contains annotations in Romanian, English, and Russian, an introduction, 3 chapters, general conclusions and recommendations, a bibliography of 177 titles, 21 appendices, 141 pages of main text, 9 figures, and 15 tables. The obtained results are published in scientific papers, including 12 full-text articles (9 in scientific journals and 3 in proceedings of scientific events) and 4 abstracts of scientific communications.

Keywords: cognitive schemas, acute stress, anxiety, depression, coping strategies, intensive care, psychological intervention.

The aim of the study: is to identify and analyze the relationship between the characteristics of cognitive schemas (examined through the lens of cognitive-emotional coping strategies) and manifestations of acute stress in patients hospitalized in intensive care units, and to develop, implement, and validate the effectiveness of an integrative-strategic (SCE-ATI) intervention program designed to modify maladaptive cognitive schemas and reduce manifestations of acute stress, with the aim of facilitating the adaptation and recovery process of critically ill patients.

Research objectives: (1) To synthesize the specialized literature on the theoretical and empirical foundations of acute stress in critical medical contexts; (2) To identify maladaptive cognitive mechanisms and psycho-affective characteristics in patients with acute stress admitted to intensive care units; (3) Selection and use of a psychodiagnostic instrument to assess cognitive-emotional coping strategies and manifestations of acute stress; (4) Correlational and predictive analysis of the relationship between maladaptive cognitive schemas (operationalized through cognitive-emotional regulation strategies) and the intensity of acute stress manifestations in patients admitted to the intensive care unit. (5) Design and implementation of the Integrative-Strategic Psychological Program for Cognitive and Emotional Support in the ICU (SCE-ATI); (6) Validation of the effectiveness of the SCE-ATI Program in reducing manifestations of acute stress by optimizing maladaptive cognitive mechanisms in patients admitted to the intensive care unit.

Scientific novelty and originality of the study: This study represents an innovative approach in the academic field that systematically investigates and empirically validates an integrative-strategic model of acute stress manifestations in patients admitted to intensive care units. At the theoretical level, the study demonstrates the predictive role of maladaptive cognitive schemas in the dynamics of acute stress among patients admitted to intensive care units. At the practical level, the absolute novelty lies in the development and validation of the Psychological Program for Cognitive and Emotional Support in the ICU (SCE-ATI), offering specialists an integrated model of psychological assessment and intervention, adaptable to the vulnerabilities of critically ill patients, with the results confirming the effectiveness of individualizing psychological support in relation to the physiological limitations and psycho-emotional needs of critically ill patients.

Implementation of scientific results: achieved through the application of the program in ICU departments, academic dissemination, the substantiation of best practice guidelines, and the use of CES-ICU as training material for psychologists and medical staff.

The results obtained contribute to solving the scientific problem: the program's effectiveness was statistically demonstrated, with study participants showing significant reductions in stress, anxiety, and depression compared to the control group. At the same time, the theoretical model of the research was empirically confirmed by highlighting the role of maladaptive cognitive schemas (operationalized through coping mechanisms such as catastrophizing, rumination, and self-blame) in generating and maintaining acute stress.

Theoretical value of the research: the study substantiates an explanatory model regarding the predictive role of maladaptive cognitive schemas in the dynamics of acute stress among intensive care patients, highlighting the relationship between deep cognitive structures and adaptation mechanisms in life-threatening situations. The findings contribute to expanding psychological knowledge on the functioning of cognitive schemas under conditions of major stress.

Practical value of the research: the paper validates the Cognitive and Emotional Support Program in ICU (CES-ICU), providing an integrated model of psychological assessment and intervention for critically ill patients. The results support the need to integrate individualized psychological support as a standard of care in intensive therapy.

Implementation of scientific results: the results are implemented through the application of the program in intensive care units, academic dissemination, the development of good practice guidelines, and the use of SCE-ATI as training material for psychologists and medical staff.

АННОТАЦИЯ

Сучаги, Мариана. Особенности когнитивных схем и проявления острого стресса у пациентов отделений интенсивной терапии. Диссертация на соискание ученой степени доктора психологии, Кишинев, 2026

Структура диссертации: работа содержит аннотации на румынском, английском и русском языках, введение, 3 главы, общие выводы и рекомендации, библиографию из 177 наименований, 21 приложение, 141 страницы основного текста, 9 рисунков и 15 таблиц. Полученные результаты опубликованы в научных работах, из которых 12 полнотекстовых статей (9 в научных журналах и 3 в сборниках материалов научных мероприятий) и 4 резюме научных сообщений.

Ключевые слова: когнитивные схемы, острый стресс, тревога, депрессия, стратегии копинга, интенсивная терапия, психологическая интервенция.

Цель работы: заключается в выявлении и анализе связи между особенностями когнитивных схем (рассматриваемых через призму когнитивно-эмоциональных стратегий преодоления) и проявлениями острого стресса у пациентов, госпитализированных в отделениях интенсивной терапии, а также в разработке, внедрении и подтверждении эффективности интегративной - стратегического (SCE-ATI), направленного на изменение дезадаптивных когнитивных схем и уменьшение проявлений острого стресса с целью содействия процессу адаптации и восстановления пациентов, находящихся в критическом состоянии.

Цели исследования: (1) Обзор специализированной литературы по теоретическим и эмпирическим основам острого стресса в условиях критической медицинской ситуации; (2) Выявление дезадаптивных когнитивных механизмов и психоаффективных особенностей пациентов с острым стрессом, госпитализированных в отделениях интенсивной терапии; (3) Выбор и использование инструментария психодиагностики для оценки когнитивно-эмоциональных стратегий преодоления стресса и проявлений острого стресса; (4) Корреляционный и предиктивный анализ связи между дезадаптивными когнитивными схемами (операционализированными через стратегии когнитивно-эмоциональной регуляции) и интенсивностью проявлений острого стресса у пациентов, госпитализированных в отделение интенсивной терапии. (5) Разработка и внедрение интегративно-стратегической психологической программы когнитивной и эмоциональной поддержки в отделении интенсивной терапии (SCE-ATI); (6) Подтверждение эффективности программы SCE-ATI в снижении проявлений острого стресса путем оптимизации дезадаптивных когнитивных механизмов у пациентов, госпитализированных в отделение интенсивной терапии.

Научная новизна и оригинальность работы: представляет собой новаторский подход в академической среде, направленный на систематическое исследование и эмпирическую проверку интегративно-стратегической модели проявлений острого стресса у пациентов, находящихся в отделениях интенсивной терапии. На теоретическом уровне исследование демонстрирует прогностическую роль дезадаптивных когнитивных схем в динамике острого стресса у пациентов, госпитализированных в отделения интенсивной терапии. На прикладном уровне абсолютной новизной является разработка и валидация Программы психологической когнитивно-эмоциональной поддержки в отделениях интенсивной терапии (SCE-ATI), предлагающей специалистам интегрированную модель психологической оценки и вмешательства, адаптируемую к уязвимости пациентов в критическом состоянии, результаты подтверждают эффективность индивидуализации психологической поддержки с учетом физиологических ограничений и психоэмоциональных потребностей пациентов в критическом состоянии.

Полученные результаты, способствующие решению научной проблемы: статистически доказана эффективность программы, участники исследования продемонстрировали значительное снижение уровня стресса, тревоги и депрессии по сравнению с контрольной группой. В то же время была эмпирически подтверждена теоретическая модель исследования путем выявления роли дезадаптивных когнитивных схем (осуществляемых через механизмы копинга, такие как: катастрофизация, пережевывание, винизация) в генерации и поддержании острого стресса.

Теоретическая ценность исследования: исследование обосновывает объяснительную модель предикторной роли дезадаптивных когнитивных схем в динамике острого стресса у пациентов отделений интенсивной терапии, раскрывая взаимосвязь между глубинными когнитивными структурами и механизмами адаптации в ситуациях угрозы жизни. Полученные результаты расширяют психологические знания о функционировании когнитивных схем в условиях выраженного стресса.

Практическая ценность исследования: работа валидирует Программу когнитивной и эмоциональной поддержки в ОИТ (SCE-ATI), предлагая интегрированную модель психологической оценки и интервенции для критических пациентов. Результаты подтверждают необходимость интеграции индивидуализированной психологической поддержки как стандарта ухода в интенсивной терапии.

Внедрение научных результатов: результаты реализуются путем применения программы в отделениях интенсивной терапии, академического распространения, обоснования руководств по передовой практике и использования SCE-ATI в качестве учебного материала для психологов и медицинского персонала.

SUCIAGHI, MARIANA

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