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## AN INTEGRATED MODEL OF PSYCHOTHERAPEUTIC SUPPORT IN THE SYSTEM OF THERAPY FOR COVID-19 PATIENTS

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<https://doi.org/10.35339/ic.9.2.les>

### Abstract

**Introduction.** To date, it has been already established that COVID-19 has a negative impact not only on the physical condition, but also on the mental health of the population in every country of the world. Many people have a fear of coronavirus, which is usually associated with the possible risk of infection, the lack of pathogenetic treatment, unpredictable course of the disease, as well as total uncertainty. All of the above causes negative psychological reactions. according to a scientific review published by the World Health Organization, global prevalence of anxiety and depression increased by a quarter of a percent in the first year of the COVID-19 pandemic. The **aim** of the study was to develop an integrated model of psychotherapeutic support for patients with COVID-19.

**Materials and Methods:** a comprehensive clinical-psychopathological and psychodiagnostic examination of 125 patients with COVID-19 and non-psychotic mental disorders, of both sexes, with an average age of  $36.0 \pm 3.4$  years, was conducted.

**Results.** The findings of the clinical-psychopathological study suggest that the clinical picture of non-psychotic mental disorders in the examined patients is represented by astheno-neurotic, anxious, depressive and cognitive syndromes. The psychotherapeutic program included individual and group psychotherapy and psychoeducation. An important component of the psychotherapeutic support program was psychoeducation aimed at developing an adequate system of ideas about the neurotoxic impact and consequences of COVID-19, understanding the main psychopathological syndromes caused by the disease, involving patients in active participation in treatment, and teaching methods of overcoming immersion in the disease.

**Conclusions.** The analysis of the clinical findings of using the developed program showed a positive dynamic of the emotional state, a decrease in the expressiveness of anxiety-depressive symptoms, a positive transformation of coping strategies, the transition of non-constructive types of attitudes to the disease into adaptive, constructive ones, and an increase in the quality of life.

**Keywords:** *psychotherapy, treatment, comprehensive approach, mental disorders.*

### INTRODUCTION

The COVID-19 pandemic is one of the largest global crises that humanity has faced in the recent decades. It has serious negative consequences for both human health and health care systems, the economy and society [1; 2].

Similar to other coronaviruses, Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), exhibits neurotropism. Systemic inflammation, as well as neuroinflammatory changes, are

caused by a massive increase in pro-inflammatory cytokines, neuroglial reactivity, altered neurochemical profile, and pathological remodeling of neuronal networks. These organic changes, which occur together with external stressors caused by experiences of staying in intensive care units, fear of a pandemic and social restrictions, financial and economic problems, contribute to development of psychological and pathopsychological disorders [3; 4].

To date, it has been established that COVID-19 has an unfavorable impact on mental and emotional well-being of population around the world. The fear of coronavirus, associated with the possible risk of infection, the unpredictable course of the disease, the lack of pathogenetic treatment and

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total uncertainty, causes negative psychological reactions. According to a scientific review published by the World Health Organization, worldwide prevalence of depression and anxiety rose by 25% for the first year of COVID-19 pandemic [5; 6].

At present, there is a need for development of personalized programs for pathogenetically based therapy and rehabilitation of persons who have suffered from COVID-19. Modern medical care strategies define six goals on the way to improving the quality of treatment and rehabilitation of patients: safety, efficiency, patient-orientation, timeliness, rationality, impartiality of care. At the same time, it is psychotherapy and medical-psychological rehabilitation that are extremely important and complementary therapeutic strategies [7; 8].

Pandemic of coronavirus disease significantly affects the psychological state and disrupts the mental balance of various population groups around the world, which is confirmed by a number of empirical studies. Timely and effective psychological and psychotherapeutic help during this special period is urgently needed. Inevitable changes due to the pandemic situation generate a challenge to create relevant modifications of psychological and psychotherapeutic support. The major challenge of these modifications is highly preserve stability of the treatment environment and continuation of necessary patient's assistance in such strenuous conditions as quarantine [9–11].

**The aim of the study** was to develop an integrated model of psychotherapeutic support for patients with COVID-19.

#### **Material & Methods**

In order to achieve the goal, a comprehensive clinical-psychopathological and psychodiagnostic examination was conducted in 125 patients with non-psychotic mental disorders and COVID-19. The examinees were of both genders (57 males and 68 females) and had a mean age of  $36.0 \pm 3.4$  years. Informed consent for participation in a scientific study and compliance with the principles of bioethics and deontology was obtained. Mathematical and statistical processing of the study results was performed using specialized software packages (Statistica 6.0, MS Excel) using the Student's t-test methodology.

The following psychodiagnostic methods were also used for the research: the Hospital Anxiety and Depression Scale, the "Methods of Coping Behavior" method (Lazarus R., Folkman S., adapted by Kryukova T., 2002), the questionnaire

"Type of attitude towards the disease" (Mendelevykh V.D., 2005), "The Integral Quality of Life Scale" (Mezzich et al., 1999, modified by Maruta N.O., 2004).

During the clinical-psychopathological examination, it is planned that the clinical picture of non-psychotic mental disorders in the examined patients will be manifested in depressive, anxious, astheno-neurotic and cognitive syndromes. The following psychotherapeutic interventions in various combinations will be used for these syndromes.

The method of biosuggestive therapy (by Strazhny O., 1996; patented on 2019) [12] is a simple psychotherapeutic technique aimed at ridding a person of mental disorders, restoring psychological comfort and well-being. This method includes a combination of verbal and non-verbal suggestion techniques in a light trance state. The use of the prefix "bio" in the name indicates that not only suggestion is used, but also other influences: the contact of the therapist's palm with the client, a certain tone of voice, in the situation of group therapy – induction of the client by group members.

With the help of art therapy, the most disturbing aspects of life are sublimated into the outside world. One of the important advantages of art therapy is that art allows you to reconstruct a conflict-traumatic situation in a hidden symbolic form and find its solution.

Mindfulness, which is also called the practice of self-awareness or the practice of attentiveness, is a meditation technique, the essence of which is to return your attention to what is happening "here and now", to make each action conscious instead of thinking about thousands of things at once.

The purpose of stress resistance training is to develop it by making patients aware of their position in life, forming effective communication skills in the process of communication, acquiring self-control skills and constructive expression of negative impulses in behavior.

Body-oriented psychotherapy is one of the directions of modern psychotherapy, which is based on the principle of stabilizing emotional state through work with the body and allows you to reunite feelings, bodily sensations and thoughts, restore lost relationships between them.

An important component of the psychotherapeutic support program is psychoeducation aimed at forming an adequate system of ideas about the neurotoxic impact and consequences of COVID-19,

understanding the main psychopathological syndromes caused by the disease, involving patients in active participation in treatment and teaching methods of overcoming immersion in the disease.

In the course of the study, an integrative model of psychoeducational work was used, which included: informational training, training of interpersonal interaction, improvement of compliance, problem-oriented discussions. A separate training was dedicated to providing information directly about COVID-19, clarifying meaning of the term pandemic, need to follow the rules that all people without exception must comply with during the quarantine period.

### Results & Discussion

The findings of the clinical psychopathological study indicated that clinical presentation of non-psychotic mental disorders in the subjects is showed in depressive (29.1% of the examined), anxious (33.4% of the examined), astheno-neurotic (24.2% of the examined) and cognitive (13.3% of the examined) syndromes.

In consideration of the data collected during the comprehensive examination of pathopsychological, psychological and clinical psychopathological features of patients with COVID-19 was developed an integrated model of psychotherapeutic support for such patients, which includes psychotherapy and psychoeducation.

The psychotherapeutic program included individual and group psychotherapy and psychoeducation.

Cognitive behavioral therapy, biosuggestive therapy, art therapy, mindfulness technique were used for depressive syndrome. Duration of psychotherapy was 4–8 weeks.

In a case of an anxious syndrome cognitive-behavioral therapy, biosuggestive therapy, stress resistance training were used. Psychotherapy lasted for 4–8 weeks.

Cognitive-behavioral therapy, biosuggestive therapy, body-oriented psychotherapy, art therapy for astheno-neurotic syndrome treatment were used. Duration of psychotherapy was 3–6 weeks.

Cognitive-behavioral therapy and cognitive training were used for cognitive syndrome. Psychotherapy lasted for 10–12 weeks.

Cognitive-behavioral therapy was aimed at correcting behavioral forms of response, realizing own life values and changing one's life path based on these values, accepting full responsibility for own choices.

The analysis of clinical results of the use of the developed program showed a positive dynamic of the emotional state, a decrease in the expressiveness of anxiety-depressive symptoms (68.3% of the examined patients) such scores were obtained due to the Hospital Anxiety and Depression Scale, before and after therapy; a positive transformation of coping strategies (59.8%) such scores were obtained due to the "Methods of Coping Behavior" method (Lazarus R., Folkman S., adapted by Kryukova T., 2002) method before and after therapy; transition of non-constructive types of relationship to the disease into adaptive, constructive ones (61.4%) such scores were obtained due to the questionnaire "Type of attitude towards the disease" (Mendelevych V.D., 2005) before and after therapy of the; improvement of the quality of life (64.7%) such scores were obtained through "The Integral Quality of Life Scale" (Mezzich et al., 1999, modified by Maruta N.O., 2004) before and after therapy.

Unfortunately, there is currently no description of psychotherapeutic interventions for patients with psycho-emotional disorders who have suffered from COVID-19. Of course, there is a large number of separate studies that relate to psychotherapy of psycho-emotional disorders without taking into account somatic and infectious diseases. The article by Corpas J. et al. views various types of psychotherapeutic interventions for psycho-emotional disorders [13; 14].

### Conclusions

An integrated model of psychotherapeutic support for patients with COVID-19 showed a positive dynamic of the emotional state, a decrease in the expressiveness of anxiety-depressive symptoms, positive transformation of coping strategies, transition of non-constructive types of relationship to the disease into adaptive, constructive ones, improvement of the quality of life.

### DECLARATIONS:

#### Statement of Ethics

The authors have no ethical conflicts to disclosure.

#### Consent for publication

All authors give their consent to publication.

#### Disclosure statement

The authors have no potential conflicts of interest to disclosure.

#### Data Transparency

The data can be requested from the authors.

#### Funding sources

There are no external sources of funding.

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*Received: 22 Aug 2022*

*Accepted: 27 Oct 2022*

**Cite in Vancouver style as:** Leshchyna IV. An integrated model of psychotherapeutic support in the system of therapy for COVID-19 patients. *Inter Collegas.* 2022;9(2):29-32. <https://doi.org/10.35339/ic.9.2.les>

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