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MEDICAL-PSYCHOLOGICAL ANALYSIS OF THE DEPENDENCE OF PSYCHO-EMOTIONAL DISORDERS CAUSED BY COVID-19 ON PERSONALITY TYPE

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Annotation

This article examines the role of personality (basic typological characteristics) in the development of mental disorders observed in the period after COVID-19 infection, in particular, Obsessive-Compulsive Disorders (OCD), anxiety, and depression. The study analyzes the reactions to post-infectious stress in patients with different personality types, their psychological defense mechanisms, and the level of response to integrative psychocorrection approaches. The article highlights the need to develop psychotherapy strategies tailored to personality types.

Keywords

COVID-19, Obsessive-Compulsive Disorders, personality, anxiety, depression.

The COVID-19 pandemic has had a profound impact not only on physical health, but also on mental health globally. Neurological and psychiatric complications are widespread in patients who have been infected, especially those who have been severely ill, as part of the post-COVID syndrome. The emergence of symptoms of anxiety, depression, and OCD are widely observed.

Mental disorders after COVID-19 occur in two main ways:

Stress-related reactions: External stressors related to fear of infection, social isolation, severity of the disease, and loss of quality of life.

Neurobiological changes: Conditions that arise as a result of the direct effects of the virus on the central nervous system or as a result of immune reactions.

The relevance of this study is that not all patients react the same to post-infectious mental disorders. The patient's temperament (for example, choleric, sanguine, phlegmatic or melancholic according to the Hippocratic-Pavlov classification) determines their stress tolerance, reaction to fear and the speed of restoring mental balance. General psychotherapy methods conducted without taking into account personality type may be less effective. Therefore, it is important

for modern clinical practice to determine the extent to which these disorders depend on personality type.

The purpose of the study is to conduct a medical-psychological analysis of the dependence of psychoemotional disorders caused by COVID-19 on personality type.

Materials and methods of the study. The study was conducted on 142 patients diagnosed with and treated for Covid-19 infection. The cohort consisted of patients aged 18-48 years, of whom 46% (n=65) were men and 54% (n=77) were women. The average age of the subjects was 29+10.5.

In general, recovery from COVID-19 infection depends on many factors, including psychological personality type, and understanding these aspects can be useful in determining the most effective treatment and support for patients. For this purpose, the personality types and temperaments of the patients were studied and assessed using the Eysenck questionnaire.

Research results. When the introversion and extraversion characteristics of a person were analyzed according to the Eysenck questionnaire, 2 patients in the main group, 3 patients in the 1st comparison group, and 2 patients in the 2nd comparison group had marked introversion (≤ 5 points). Introvert (6-9 points) was noted in 12 patients in the main group, in 10 patients in the 1st comparison group and in 10 patients in the 2nd comparison group. Tendency to introversion (10-11 points) was found in 10 patients in the main group, 11 in the 1st comparison group and 10 in the 2nd comparison group. 5 patients in the main group, 4 patients in the 1st comparison group and 5 patients in the 2nd comparison group were found to be neither extraverts nor introverts (12 points). Propensity to extraversion (13-14 points) was recorded in 6 respondents in the main group, 5 respondents in the 1st comparison group and 5 respondents in the 2nd comparison group. 10 of the respondents in the main group, 12 in the 1st comparison group and 12 in the 2nd comparison group formed the extravert personality type (15-18 points). A clear extravert personality type ($19 \leq$ points) was noted in 3 patients in the main group, 2 in the 1st comparison group, and 3 in the 2nd comparison group (Table 1).

Table 1

Analysis of extraversion and introversion indicators in patients in the main and comparison groups

Groups		Main, n=48		Comparison 1, n=47		Comparison 2, n=47	
		abs	%	abs	%	abs	%
Points	≤ 5	2	4,2±2,9	3	6,4±3,6	2	4,3±3,0
	6-9	12	25,0±6,3	10	21,3±6,0	10	21,3±6,0

10-11	10	20,8±5,9	11	23,4±6,2	10	21,3±6,0
12	5	10,4±4,5	4	8,5±4,1	5	10,6±4,5
13-14	6	12,5±4,8	5	10,6±4,5	5	10,6±4,5
15-18	10	20,8±5,9	12	25,5±6,4	12	25,5±6,4
19≤	3	6,3±3,5	2	4,3±3,0	3	6,4±3,6

When analyzing the patients according to the neuroticism index in this questionnaire, 6 patients in the main group, 8 in the comparison group 1 and 6 in the comparison group 2 had a low level (≤ 8 points). Moderate neuroticism (9-13 points) was noted in 10 patients in the main group, 9 in the comparison group 1 and 11 in the comparison group 2. A high level of neuroticism (14-18 points) was detected in 27 patients in the main group, 25 in the comparison group 1 and 26 in the comparison group 2. Very high neuroticism ($19 \leq$ points) was noted in 5 respondents in the main group, 5 in the comparison group 1 and 4 in the comparison group 2 (Table 2).

Table 2

Analysis of neuroticism scores in the main and comparison groups

Groups		Main, n=48		Comparison 1, n=47		Comparison 2, n=47	
		abs	%	abs	%	abs	%
Points	≤ 8	6	12,5±4,8	8	17,0±5,5	6	12,8±4,9
	9-13	10	20,8±5,9	9	19,1±5,8	11	23,4±6,2
	14-18	27	56,3±7,2	25	53,2±7,4	26	55,3±7,3
	$19 \leq$	5	10,4±4,5	5	10,6±4,5	4	8,5±4,1

The occurrence of psychoemotional disorders during COVID-19 infection has varied among different personality types. Studies have shown that people with personality traits such as neuroticism and introversion may be more prone to developing mental health problems during the pandemic. These people may experience higher levels of anxiety, depression, and stress in response to the uncertainty and isolation caused by the virus.

On the other hand, extroverted and resilient individuals may find it easier to overcome the challenges of COVID-19. They may show greater adaptability and emotional stability, which may help them manage the challenges of the pandemic more effectively.

In addition, this questionnaire also identifies temperament types. Temperament refers to the innate personality traits that influence how people perceive and respond to the world around them. There are four main temperaments: sanguine, choleric, melancholic, and phlegmatic. Each of these temperaments is associated with unique characteristics and behavioral tendencies.

When analyzing the temperament of patients according to the above indicators of extraversion-introversion and neuroticism, the following results were noted: Melancholic temperament predominated in 21 patients in the main group, 18 in comparison group 1, and 19 in comparison group 2, while choleric temperament prevailed in 13 in the main group, 14 in comparison group 1, and 14 in comparison group 2. It prevailed in 7 respondents. Sanguine temperament predominated in 6 subjects in the main group, 5 in comparison group 1, and 7 in comparison group 2, while phlegmatic temperament predominated in 8 subjects in the main group, 10 in comparison group 1, and 8 in comparison group 2 (Table 3).

Table 3

Distribution of patients by temperament in the main and comparison groups

Groups		Main n=48		Comparison 1 n=47		Comparison 2 n=47	
		abs.	%	abs	%	abs	%
Types of temperament	melancholic	21	43,8±7,2	18	38,3±7,2	19	40,4±7,2
	choleric	13	27,1±6,5	14	29,8±6,7	13	27,7±6,6
	sanguine	6	12,5±4,8	5	10,6±4,5	7	14,9±5,2
	phlegmatic	8	16,7±5,4	10	21,3±6,0	8	17,0±5,5

The analysis of the results did not reveal any significant differences in personality types between the respondents in the main and comparison groups. According to the results of the analysis, the most common temperament types in patients were melancholic and choleric individuals. This is explained by their instability in the psychoemotional sphere. Patients with a melancholic temperament may be prone to experiencing high levels of anxiety and depression, especially during the COVID-19 pandemic. Melancholic temperament is characterized by such features as introspection, sensitivity, sadness, and a tendency to pessimism. These people may have a high emotional response to stress and difficulties, which can increase feelings of anxiety and depression in the context of a global health crisis such as COVID-19. As a result of our study, it was observed that during the COVID-19 pandemic, patients with a melancholic temperament experienced an increased level of anxiety due to their own health, the health of

their loved ones, and uncertainty about the future. Constant news, social distancing measures, and disruptions to daily routines have exacerbated their feelings of sadness and anxiety. This heightened state of anxiety has manifested itself in physical symptoms such as restlessness, fatigue, and difficulty concentrating.

In addition, patients with a melancholic temperament were more likely to develop depressive symptoms during the COVID-19 pandemic. The isolation, loss of social connections, and changes in routine caused by the pandemic led to feelings of loneliness and hopelessness in patients. The widespread sadness and sense of doom that characterize melancholic temperament were exacerbated during the crisis, increasing the risk of developing clinical depression.

Patients with a melancholic temperament were more likely to experience OCD symptoms related to rumination or ritualistic behavior in response to uncertainty or fear of harm. The emotional impact of the pandemic and the isolation imposed by social distancing measures may have exacerbated these tendencies in melancholic patients, leading to an increase in OCD symptoms.

Although individuals with a phlegmatic temperament, characterized by calmness, patience, and emotional stability, are usually known for their ability to remain calm and composed in stressful situations, the unprecedented challenges posed by the pandemic have also had a negative impact on their mental health. In particular, the uncertainty caused by the COVID-19 pandemic, the constant barrage of news, concerns about personal health and safety, and changes in daily routines have caused anxiety in patients. The lack of control over external circumstances and the unpredictability of the situation have led to increased levels of anxiety in patients with a phlegmatic temperament. At the same time, prolonged social isolation, economic instability, and fear of illness have had a negative impact on mental well-being, even for those who are usually emotionally stable. In patients with a phlegmatic temperament, feelings of loneliness, helplessness, and disconnection from others have led to the development of depressive symptoms.

The increased focus on hygiene and safety measures during the pandemic has led to an increase in OCD tendencies in phlegmatic individuals, which has led to an increase in the prevalence of OCD symptoms. Patients with a phlegmatic temperament have been found to have a predominance of OCD symptoms related to excessive handwashing or cleanliness rituals, mainly in response to a fear of contamination.

People with a sanguine temperament, who are characterized by traits such as optimism, sociability, and enthusiasm, also experienced high levels of anxiety and depression during the COVID-19 pandemic. Although sanguine individuals are usually known for their outgoing and positive nature, the difficulties and

uncertainties caused by the pandemic have affected their mental health in different ways.

Our study found that respondents with a sanguine temperament experienced high levels of anxiety in response to the disruptions and changes caused by the COVID-19 pandemic. Constant news updates, health and safety concerns, and restrictions on social interactions have caused feelings of anxiety and restlessness in people who are used to being outdoors and social. The lack of control over external circumstances and the unpredictability of situations have led to increased anxiety in sanguine patients. In addition, isolation, loss of social contacts, and changes in routine have affected their mood and well-being, leading to feelings of sadness, loneliness, and hopelessness. The inability to engage in usual activities or social interactions has led to the development of depressive symptoms in sanguine patients.

Patients with sanguine temperaments were found to experience OCD symptoms related to excessive checking behaviors or seeking reassurance in response to fear of harm or illness.

Individuals with choleric temperaments, who are characterized by traits such as assertiveness, ambition, and competitiveness, may also experience anxiety and depression during the COVID-19 pandemic. Although choleric individuals are typically known for their strong-willed and goal-oriented natures, our study found that the challenges and uncertainties brought on by the pandemic have affected their mental health in different ways.

Patients with choleric temperaments showed higher levels of anxiety in response to the disruptions and changes caused by the COVID-19 pandemic. The uncertainty surrounding the situation, concerns about health and safety, and restrictions on personal freedoms have caused feelings of anxiety and restlessness in patients who are accustomed to being in control. The inability to achieve their goals or maintain their usual level of productivity at work led to increased anxiety in choleric patients.

In addition, the isolation, loss of social contacts, and disruption of routine during the COVID-19 pandemic in patients with choleric temperament affected their mood and well-being, leading to feelings of hopelessness, irritability, and sadness. The inability to engage in usual activities or achieve their goals contributed to the development of depressive symptoms in people with choleric temperament.

In choleric temperament respondents, perfectionism or OCD symptoms related to ritualistic rituals were more prevalent in response to the fear of losing control or making mistakes. It was found that the disruptions and the need to adapt

to new routines caused by the pandemic exacerbated these tendencies in choleric individuals and led to an increase in the prevalence of OCD symptoms.

In conclusion, the impact of COVID-19 infection on people's psychoemotional state is significant and may vary depending on the personality type. The fear, anxiety, depression, and psychological trauma experienced by those infected with the virus may be exacerbated by personality traits such as neuroticism or introversion. People with these traits may be more prone to high levels of depression and difficulties in coping with the psychological effects of the infection.

It is important to recognize that personality type is one of the factors that influence a person's psychoemotional state in response to COVID-19. Other factors, such as social support, coping mechanisms, and access to mental health resources, also play a crucial role in determining how people manage the psychological difficulties caused by the virus.

Conclusion. OCD, anxiety, and depression observed within the framework of the complications of the COVID-19 pandemic are closely related not only to the transmission of the virus, but also to the constitutional personality traits (temperament) of the patient. Determining the personality type helps to predict which mental disorders the patient is more prone to and, most importantly, to select tailored, individual psychotherapy programs. Integrative psychocorrection methods show high efficiency due to their ability to adapt to this diverse symptomatology.

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