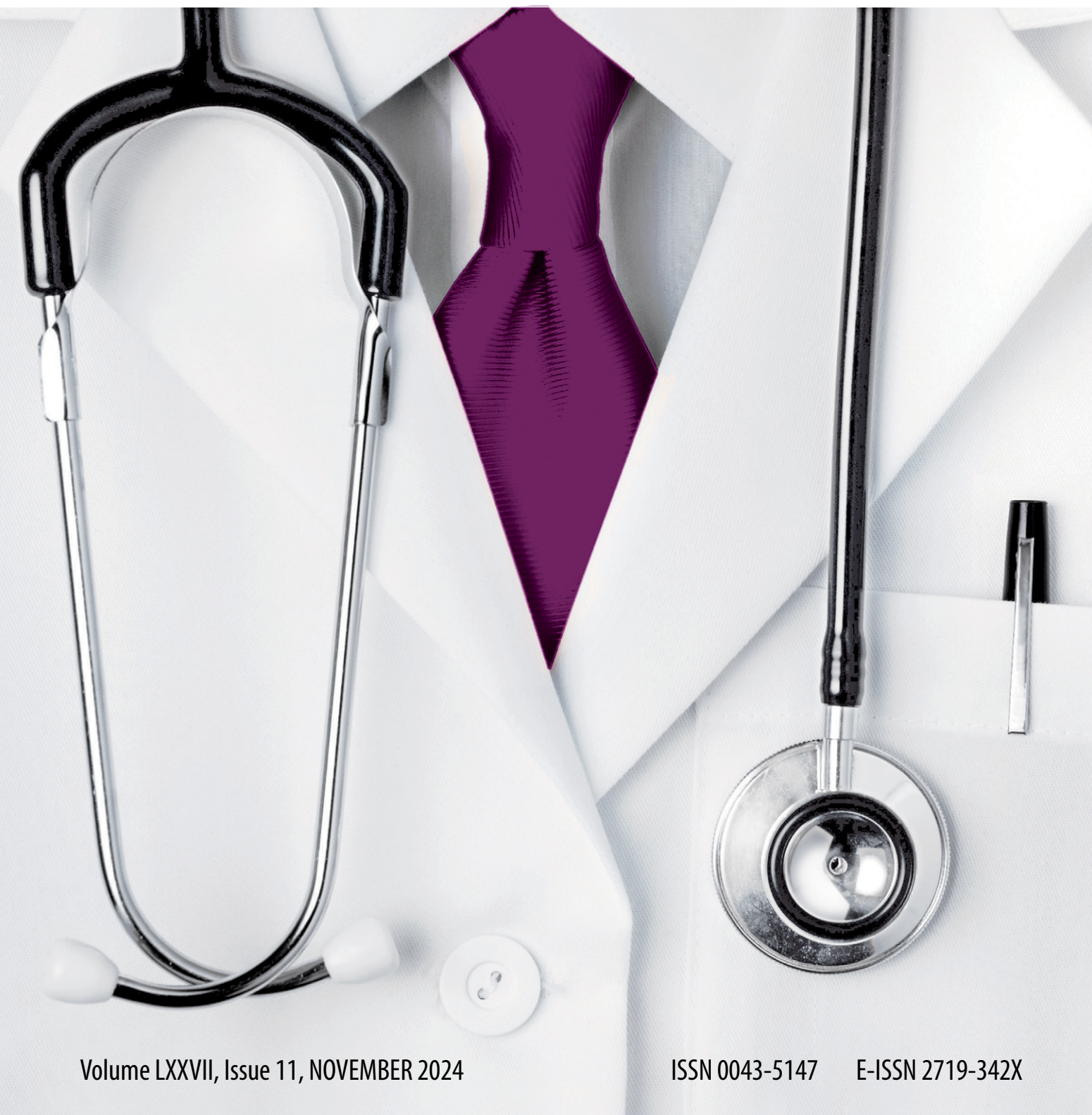


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# Impact of the Covid-19 pandemic and state of war on the availability and quality of mental health services

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## ABSTRACT

**Aim:** To investigate the relationship between the COVID-19 pandemic and the conditions of state of war in Ukraine on the availability and quality of services in the field of mental health and to improve further research in this direction.

**Materials and Methods:** Bibliographic, epidemiological, sociological, statistical methods were used in the research. The sociological survey covered 315 respondents in Kyiv region and 206 respondents in Kyiv. The quality and availability of mental health care for patients in the context of the COVID-19 pandemic and the ongoing state of war were assessed on a scale from 1 to 7 points. The correlational analysis was performed by the use of Spearman's, Kendall's, gamma rank correlation coefficients.

**Results:** Respondents in the Kyiv region, evaluating the quality of psychiatric care for patients in the conditions of the COVID-19 pandemic, gave an average rating of  $4,0 \pm 1,2$  points, accessibility –  $4,2 \pm 1,2$  points, and in the city of Kyiv  $4,2 \pm 1,3$  and  $4,2 \pm 1,3$  points. In the conditions of state of war, the average assessment of changes in the quality of psychiatric care in the Kyiv region was  $4,6 \pm 1,4$  points, and availability was  $4,9 \pm 1,4$  points, while in Kyiv it was  $4,8 \pm 1,5$  and  $4,8 \pm 1,4$  points. Correlational analysis proved the presence of a strong direct correlation between assessments of changes in the quality of psychiatric care for patients in the context of the COVID-19 pandemic and during state of war.

**Conclusions:** Preparing for pandemics and public health crises is critical to ensuring access to mental health care and requires a comprehensive approach.

**KEY WORDS:** COVID-19, pandemics, mental health, availability and quality of care, state of war

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## INTRODUCTION

Mental health is important in the fight against the COVID-19 pandemic and in the post-pandemic period. However, the field of mental health often remains underinvested and underappreciated compared to others. Typically, countries spend only 2% of their health budgets on mental health, and international aid in this area is less than 1% of total medical aid. This is a significant challenge, especially given the comorbidity of mental health and diseases such as HIV/AIDS, tuberculosis, and COVID-19 [1].

Crises cause significant stress in society, increasing the risk of mental health problems in the short and long term. Studies have shown that epidemics have a negative impact on mental health. High levels of stress in people affected by COVID-19 have also been confirmed in national surveys [1].

Before the pandemic, access to quality psychiatric care was limited, especially in humanitarian and conflict situations. The COVID-19 pandemic has affected service

delivery around the world and made the situation even worse [1].

Despite differences in the level of economic development, social and political structures, and health systems as well as mental health services around the world, emergency measures were implemented that focused on infection control, continuity of care, and ease of access. Some new approaches that have been developed appear to be effective, but they may still carry risks. Therefore, the priority remains the preservation of existing services and the introduction of new, cost-effective practices [2].

A better understanding of the potential impact of changes in essential services, including mental health services, on morbidity and mortality is needed to weigh the benefits and risks of different mitigation strategies. There is an urgent need for documentation and research on what works in different settings at different stages of the pandemic. More effective real-time monitoring of changes in service provision and utilization at the

national and facility level is also needed, as pandemics can change their dynamics [3].

A systematic review of the impact of the COVID-19 pandemic on the use of health services overall found a 37% reduction in the total volume of services, with significant variation and a greater reduction among people with less severe illnesses [4].

The problem of providing psychological support in Ukraine during the COVID-19 pandemic and during the war has become an important challenge for the health care system. Stressful factors that have disrupted normal life have a negative impact on the mental health of Ukrainians, causing anxiety, panic attacks, depression and post-traumatic stress disorder. The relevance of psychological help is increasing due to the need to preserve mental health in crisis conditions. The support of mental health professionals is key to protecting the health of Ukrainians, which is important for the future [5].

## AIM

To investigate the relationship between the COVID-19 pandemic and the conditions of state of war in Ukraine on the availability and quality of services in the field of mental health and to improve further research in this direction.

## MATERIALS AND METHODS

Bibliographic, epidemiological, sociological, statistical methods were used in the research. Ukrainian and foreign scientific literature on the research topic was used. The sociological survey covered 315 respondents in the Kyiv region, of whom 69,84% (n=220) were educators, 16,51% (n=52) were representatives of the social sphere, 13,02% (n=41) were specialists in health care institutions, 0,63% (n=2) were representatives of the non-state sector; and 206 respondents in Kyiv, of which 52,4% (n=108) were educators, 29,6% (n=61) were medical workers, 17,5% (n=36) were representatives of the social sphere, and 0,5% (n=1) were representatives of the non-governmental sector.

The results were obtained using a questionnaire developed by the authors as part of the framework of PsyCare-Kyiv Region project of the Ukrainian Association of Doctors-Psychologists regarding the state of the mental health system of Kyiv city and the Kyiv region, carried out with support of the Ukrainian-Swiss project "Mental health for Ukraine" (MH4U). The questionnaire included quantitative and qualitative assessments. The quality and availability of mental health care for patients in the context of the COVID-19

pandemic and state of war was assessed on a scale from 1 to 7 points. The level of assistance in the field of mental health was evaluated on a scale from 1 to 10 points. The general background of mental health in the community was evaluated by the following categories: calm; more calm than anxious; anxious in certain population groups; more anxious than calm; anxious. The following categories were proposed for the evaluation of the level of assistance in the field of mental health: the lack of mental health specialists; insufficient funding; insufficient technical base; low salaries of specialists; lack of an established traffic system consumer of services; the assistance is provided at a high level and by qualified specialists.

Statistical processing and analysis of research materials was carried out using biostatistical analysis methods implemented in Microsoft Excel 2016 and BioStat software v. 7.3 packages (AnalystSoft Inc., USA). The mean value and standard error of the mean were calculated for quantitative variables. Qualitative data were presented as absolute and relative frequency (sample proportion  $\pm$  standard error of the sample proportion). The correlation analysis was performed by calculating the Spearman's rank correlation coefficient (Rho), Kendall's rank correlation coefficient (Tau) and rank gamma correlation coefficient.

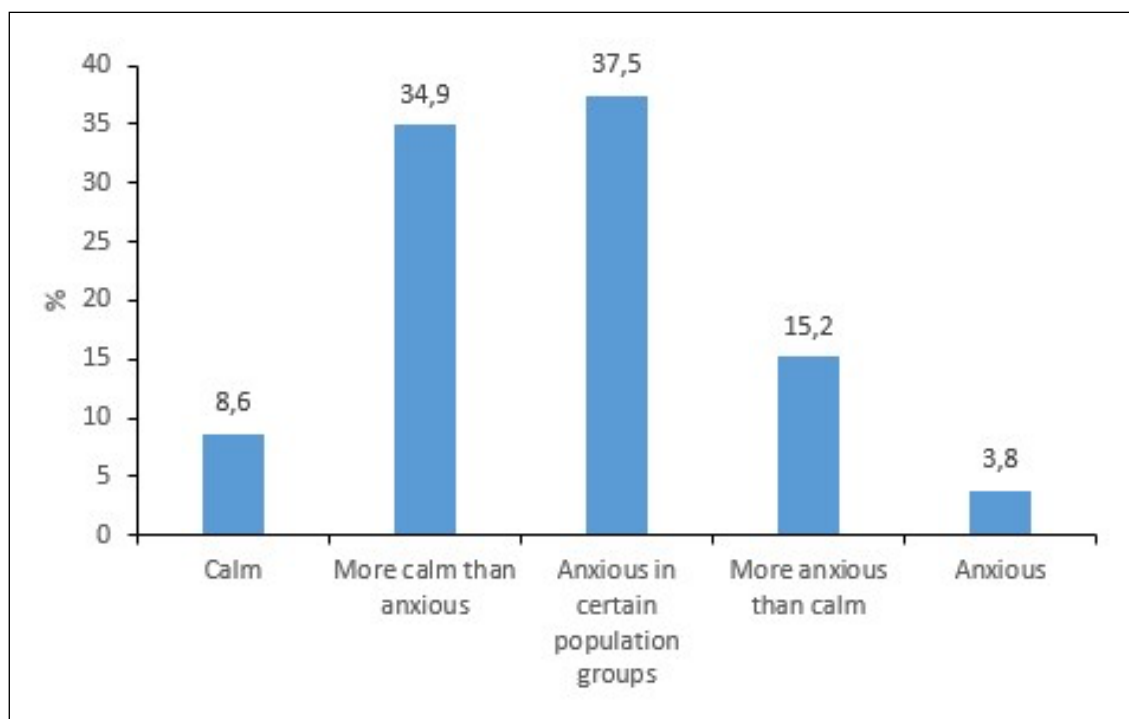
The sociological research is anonymous, did not involve the collection of confidential information and personal data (in the sense of the Law of Ukraine "On the Protection of Personal Data" – "information or a set of information about a natural person who is identified or can be specifically identified") [6].

## RESULTS

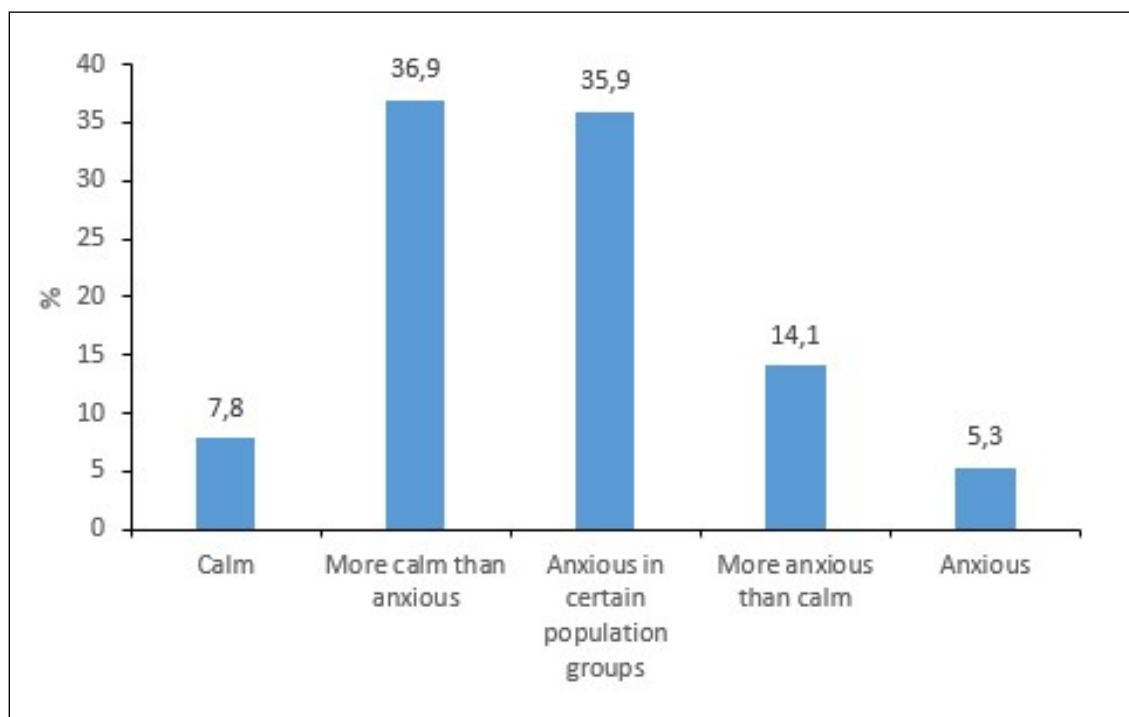
Respondents in the Kyiv region, assessing on a scale from 1 to 7 points whether the quality of psychiatric care for patients has undergone changes in the conditions of the COVID-19 pandemic, gave an average rating of  $4,0 \pm 1,2$  points, the availability of this care in the same conditions – in  $4,2 \pm 1,2$  points. In the conditions of state of war, the respondents of the Kyiv region gave an average score of  $4,6 \pm 1,4$  points for the quality of psychiatric care, and  $4,9 \pm 1,4$  points for accessibility.

The general background of mental health in the community was rated by  $37,5 \pm 2,7\%$  as anxious in certain population groups in certain population groups, another  $15,2 \pm 2,0\%$  as more worrying than calm, and  $3,8 \pm 1,1\%$  – as anxious. At the same time,  $34,9 \pm 2,7\%$  defined the state as more calm than anxious, and another  $8,6 \pm 1,6\%$  – as calm (Fig. 1).

Evaluating the level of assistance in the field of mental health in their community on a scale from



**Fig. 1.** General background of mental health in the community, Kyiv region.



**Fig. 2.** General background of mental health in the community, Kyiv.

1 to 10 points, the respondents gave an average answer of  $5,1 \pm 2,1$  points. The respondents based their assessment on the lack of mental health specialists ( $60,3 \pm 2,8\%$ ), insufficient funding ( $36,8 \pm 2,7\%$ ), insufficient technical base ( $33 \pm 2,6\%$ ), low salaries of specialists ( $27,9 \pm 2,5\%$ ), lack of an established traffic system consumer of services ( $13,7 \pm 1,9\%$ ). According

to  $11,7 \pm 1,8\%$  of respondents, assistance is provided at a high level and by qualified specialists.

Respondents in Kyiv, evaluating changes in the quality of psychiatric care for patients in the conditions of the COVID-19 pandemic on a scale from 1 to 7 points, gave an average rating of  $4,2 \pm 1,3$  points, and changes in availability in the same conditions –  $4,2 \pm 1,3$  points. In

the conditions of state of war, the average assessment of changes in the quality of psychiatric care was  $4,8 \pm 1,5$  points, accessibility –  $4,8 \pm 1,4$  points.

The general background of mental health in the community was assessed by  $35,9 \pm 3,3\%$  as anxious in certain population groups, another  $14,1 \pm 2,4\%$  as more worrying than calm, and  $5,3 \pm 1,6\%$  – how anxious. At the same time,  $36,9 \pm 3,4\%$  defined the state as calmer than anxious, and another  $7,8 \pm 1,9\%$  – as calm (Fig. 2).

Evaluating the level of assistance in the field of mental health in their community on a scale from 1 to 10 points, the respondents gave an average answer of  $5,8 \pm 2,0$  points. The respondents based their assessment on the lack of mental health specialists ( $51,9 \pm 3,5\%$ ), low salaries of specialists ( $50,5 \pm 3,5\%$ ), insufficient funding ( $49,5 \pm 3,5\%$ ), insufficient technical base ( $33 \pm 3,3\%$ ), service users do not know where to turn for qualified help ( $32 \pm 3,3\%$ ), the lack of an established system for the movement of service users ( $20,9 \pm 2,8\%$ ). According to  $23,3 \pm 2,9\%$ , assistance is provided at a high level and by qualified specialists.

Correlational analysis of the data obtained during the survey of healthcare professionals showed the presence of a strong direct correlation between assessments of changes in the quality of psychiatric care for patients in the conditions of the COVID-19 pandemic and during the state of war (Kyiv region:  $Rho = 0,611$  ( $n=41$ ;  $p < 0,05$ ),  $Tau = 0,558$  ( $n=41$ ;  $p < 0,05$ ),  $Gamma = 0,669$  ( $n=41$ ;  $p < 0,05$ ); Kyiv city:  $Rho = 0,584$  ( $n=61$ ;  $p < 0,05$ ),  $Tau = 0,522$  ( $n=61$ ;  $p < 0,05$ ),  $Gamma = 0,644$  ( $n=61$ ;  $p < 0,05$ ) and between estimates of changes in the availability of psychiatric care to patients in the conditions of the COVID-19 pandemic and during the state of war (Kyiv region:  $Rho = 0,596$  ( $n=41$ ;  $p < 0,05$ ),  $Tau = 0,564$  ( $n=41$ ;  $p < 0,05$ ),  $Gamma = 0,670$  ( $n=41$ ;  $p < 0,05$ ); Kyiv city:  $Rho = 0,602$  ( $n=61$ ;  $p < 0,05$ ),  $Tau = 0,539$  ( $n=61$ ;  $p < 0,05$ ),  $Gamma = 0,657$  ( $n=61$ ;  $p < 0,05$ ).

## DISCUSSION

The disproportionality between the need for mental health care and the provision of appropriate services has always existed, but with the onset of the COVID-19 pandemic, these problems have intensified [7, 8].

During the COVID-19 pandemic, barriers to access to services, limited funding and economic hardship have become more visible. The lack of qualified doctors, fragmented provision of medical care, imperfect policy in the field of mental health, as well as lack of education and awareness about mental illnesses are also acutely felt [9].

The global COVID-19 pandemic has disrupted mental health services worldwide, particularly in many low-

and middle-income countries, and concerns about the psychosocial impact of COVID-19 have prompted major funding agencies and governments to seek ways to address this impact [10].

Studies examining the impact of the pandemic on mental health services show a mixed picture: noticeable changes in work, insufficient staffing, equipment, standards, etc [11].

In recent years, a full-scale war had the greatest impact on all aspects of the country's life in Ukraine, which became the most difficult test in the history of its independence. This has led to an increase in the need for medical services, while at the same time reducing the system's ability to provide them, especially in active combat zones [12].

A nationwide study of Ukrainian psychiatric institutions during the Russian invasion in 2022 highlights the significant damage suffered by the structure of mental health care in Ukraine, in particular, hospitalizations decreased by 23,5%, 9,1% of the total number of medical workers was relocated, and 0,5% were injured in all institutions [13].

The prolonged stressful situation of the war negatively affects the psychological and psychophysical health of the population of Ukraine, manifesting itself in emotional and psychosomatic disorders, especially in temporarily displaced persons. Chronic stress worsens general well-being, reduces activity and mood, creating a closed circle of problems. A close relationship between the level of anxiety, vegetative disorders and psychosomatic symptoms was revealed. The risk of developing these disorders does not differ between displaced persons and those who remain [14].

A blended approach that takes into account the needs and digital skills of patients and includes both face-to-face and online methods can improve mental health outcomes in the long term. The need to increase confidence in the use of digital devices, as well as training and experience with all modalities, was identified as a key priority for both clinicians and service users [15].

Emphasis should be placed on creating clearer processes in collaboration with service users for their intended use, incorporating existing guidance and evidence, and exploring barriers [16].

## CONCLUSIONS

Challenges related to the organization of mental health became evident during the COVID-19 pandemic and were exacerbated by wartime conditions.

More than half of the respondents in the Kyiv region and the city of Kyiv assessed the general background of mental health as varying levels of anxiety. At the same time, the level

of assistance in the field of mental health was assessed by the majority of respondents as not exceeding the average.

At the same time, the correlational analysis proved the existence of a strong direct relationship between estimates of changes in the quality of mental health care for patients in the conditions of the COVID-19 pandemic and during state of war, and between estimates of changes in the availability of such care for patients in the conditions of the COVID-19 pandemic and during the state of war.

Preparing for pandemics and public health crises is critical to ensuring access to mental health care. Under such circumstances, there is an urgent need for a comprehensive approach to the system of mental health care. To effectively solve these issues, a coordinated interaction between the state, medical institutions and public organizations is needed to guarantee the availability and high quality of psychiatric care for all who need it.

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## CONFLICT OF INTEREST

The Authors declare no conflict of interest

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