

# Role of the Virtual Space in Psychological Support of Adult Ukrainian Civilians During Wartime

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**Abstract**—The purpose of the study is to find out the possibilities of digital technologies for providing psychological support to the civilian population during a large-scale war. The Taylor Anxiety Scale, Beck Depression Inventory, and self-assessment of the level of ontogenetic reflection were used. A formative experiment and observation were conducted. During the experiment, the impact of a complex of online training on the psyche of virtual space users was implemented. A dependency of anxiety and depression indicators on military events and their perception in society was revealed. The results of calculating the Student's t-test based on the experimental sample data indicate that the anxiety indicators changed six months after the implementation of the remote training program ( $t=2.456$ ;  $p=0.05$ ). No significant difference was found between the results of the second and third anxiety diagnostics. A similar trend in the experimental group is recorded for the depression parameter. Reflection does not significantly change according to the indicators of repeated diagnosis ( $t=1.771$ ). At the same time, other coefficients indicate a significant change in the structure of reflection after completion of distance learning courses ( $t=4.221$ ;  $t=3.929$ ;  $p=0.01$ ). It was found that conducting distance training within a virtual space allowed to stabilize emotional characteristics and eliminate further destructive trends. The most effective organization of virtual psychological influx was found in the direct development of reflection. The obtained results can be used in the improvement of treatment programs for depression and anxiety, taking into account the possibilities of virtual space. Further prospects can be seen in the development of the effectiveness of psychological support programs on the Internet for military personnel and war veterans.

**Keywords** — adults, civilian population, psychological support, wartime, virtual space, anxiety, depression, reflection.

## I. INTRODUCTION

Psychological support for the activities of civilians during the war is a necessary precondition for the country's movement toward victory. The constant progress in the direction of digitalization of society and the integration of multimedia and interactive technologies into various spheres of human activity provide new resources and opportunities for psychological support. In modern conditions, the use of appropriate digital technologies and resources is an indispensable component of psychological support activities. During the war, as well as in the post-war period, the issue of providing psychological support to the civilian population, in particular with the use of digital technologies, acquires special importance and social relevance.

The use of Internet resources for psychological development and support to the personality is an actual topic of scientific research, [1]. A large array of convincing evidence regarding the use of digital technologies to support the mental health of adults was obtained during the coronavirus pandemic, [2]. The issue of improving an individual's mental health in non-standard situations attracts attention, [3]. It has been found that this process requires a certain flexibility and competence from specialists in the possession of modern information technologies, [4]. The effectiveness of psychological and psychoeducational online interventions for the prevention of depression, as well as the role and place of virtual reality in psychotherapy and psychological support, has been considered, [5]. The use of narrative technologies to support the mental health of adults

on the Internet has been given attention, [6]. The role of social networks in the development of resilience [7] and the adult's subjectness development [8] has been analyzed separately. It is worth noting that some researchers caution against the unjustified use of virtual resources for psychological support, [9].

Thus, the theoretical analysis of modern primary sources on the researched topic indicates the possibility of providing psychological support to the civilian population using digital technologies. But, in particular, the virtual space of the Internet in the format of the Facebook social network community is insufficiently disclosed and almost not researched in the aspect of psychological support of the adult civilian population in wartime conditions. There is an urgent need to study relevant opportunities and determine their application areas and prospects for further development.

The research goal is to find out the possibilities of digital technologies for providing psychological support to the civilian population during a large-scale war.

Research objectives: 1) to find out the possibilities of the virtual space for psychological support of the individual; 2) to empirically determine indicators of the psychological state of adults in war conditions; 3) to check the effectiveness of the system of psychological support to the individual in the virtual space in the conditions of war.

## II. LITERATURE REVIEW

The analysis of theoretical sources allows us to highlight a number of studies that confirm the effectiveness of using Internet resources for psychological development and support. In particular, the role of webinars as a platform for providing group support to former combatants [10] and overcoming the consequences of psychological traumatization of police officers and military personnel [11] has been proven. The use of the Internet to implement cognitive-behavioral psychotherapy aimed at improving the mental health of students [12] is effective. Modern information technologies can have a moderately positive impact on the cognitive development of the elderly, [13]. The use of the Internet in old age contributes to the improvement of physical and mental health, increases social well-being, and forms more responsible behavior regarding one's own health, [14]. The growth of subjective health indicators of elderly people in the process of using virtual space resources was determined, [15]. During the COVID-19 pandemic, video consultations aimed at protecting public health [16] have proven themselves positively. A significant change in social processes during the spread of the coronavirus has led to the active transition of counseling psychologists and psychotherapists to online activities, [17]. Although this approach cannot fully replace direct contact, it eliminates several logistical problems, facilitates access to psychological support resources, and removes some psychological barriers, [18]. Remote psychotherapy via information technologies has been recommended for its effectiveness and advantages compared to the face-to-face

approach, [19]. Creating an online group of representatives of a certain professional field can increase the productivity of decision-making compared to similar structures in direct communication, [20].

Consideration of the problem of providing psychological support using Internet resources involves clarifying the key psychological characteristics of online communities. Their functioning depends on specific factors of group dynamics, the socio-psychological structure of the group, and the socio-historical context, [21]. The speed of participants' integration into the virtual community is influenced by the communicative sphere and the individual's style of activity, [22]. At the same time, the motivation to participate in joint activities increases depending on the level of acceptance of the person by other members of the virtual community, [23]. For stabilizing the activity of the community in a virtual space, an important aspect is the formation of communicative connections based on emotional attachment, [24]. An important element of the activity of virtual communities is the clear setting of activity goals and the formation of a complex of common values, [25]. Such processes contribute to the stabilization of social connections in the virtual community and increase its overall cohesion, [26]. The activities in the virtual space of the subjects, as well as the participation of artificial intelligence, form a common context of working with knowledge and communication, which can be created and combine various resources for learning and intellectual development, [27].

By virtual space, we mean the space of the Internet and social networks, constructed by the subject for himself, in which he exists as a "virtual" personality, [8]. These sites, groups in social networks, and other resources with which the subject constantly works, on which he studies, communicates, plays, from which he prefers news, etc. are meant. We distinguish virtual educational environment and virtual educational space, as well as virtual environment, and virtual space, they are separate phenomena. The virtual environment is a digital environment (usually the Internet) that surrounds subjects, is not specially created or designed, and is used for various activities (searching, working, communicating, relaxing, playing, etc.). The virtual space is a digital environment that surrounds subjects, is specially designed and created for specific purposes and tasks, and is used for their implementation. The virtual educational environment is a digital environment that surrounds subjects, emerges spontaneously, and is used for educational or upbringing purposes, [8]. It should be noted that there is scientific evidence indicating no significant differences between education in virtual environments and traditional forms of learning, [28]. These results should be viewed from the perspective of sociocultural differences. In conclusion, it can be said that in modern psychological science, the opinion about the appropriateness of using virtual environments for psychological support of individuals is well-founded, [29].

Psychological support for the civilian population, especially with the use of digital technologies, becomes especially important during a large-scale war. Psychological

support can be defined, in our opinion, as the enhancement of individuals' socio-psychological competence, the formation of strategies and tactics for productive thinking and activity, management of emotional states, etc., through direct or mediated (especially by digital technologies) work of psychologists with these individuals.

Therefore, the review of theoretical sources shows that the problem of organizing psychological support in the virtual space is represented by a significant number of studies. At the same time, the possibilities of using the tools of the Internet space in the process of psychological support during the war remain open.

### III. METHODS AND MATERIALS

The study took place from October 2022 to December 2023 and included the following *stages*:

Justification of the scientific problem (October 2022). At this stage, the criteria for the mental state of the personality were clarified, the dynamics of which indicate the effectiveness of organized psychological support in virtual space - anxiety, depression, and reflection. These indicators reflect a comprehensive characteristic of the emotional and intellectual spheres of the psyche. The hypothesis of the study was formulated: a theoretically and methodically substantiated system of psychological support in virtual space is an effective tool for reducing anxiety, and depression, and developing reflection of the civilian population in wartime conditions.

Planning the research (November 2022 – December 2022). The composition, indicators, and strategy of forming research samples, diagnostic methods, specificity of experimental influence, and data analysis algorithm are defined. The virtual space where the psychological influence is realized is created due to the online training complex.

Conducting primary diagnostics (January 2023): implementation of the selected complex of methods. The stage took place online using Google Forms.

Empirical stage (February – October 2023). Within the framework of the paradigm of the formative experiment, a set of measures for psychological support in the virtual space was implemented.

Repeated diagnostics (June 2023): the implementation of a set of diagnostic methods to establish intermediate results of the formative experiment.

The third diagnostic cut (October – November 2023): the final cut aimed at determining the overall effectiveness of the experimental work.

The stage of data processing and interpretation (November - December 2023). Changes in quantitative indicators for each studied parameter (anxiety, depression, reflection) were analyzed. On the basis of the revealed trends, conclusions are made about the effectiveness of the experimental program of psychological support to the civilian population in wartime conditions.

#### A. Instruments

The following diagnostic tools were used: method of anxiety measurement [30], depression scale [31], and Self-assessment of the level of ontogenetic reflection, [32]. All these methods are adapted for use in the Ukrainian-speaking environment. The tools are valid and reliable, which is confirmed by the opinion of the involved experts. Their advantage is a small volume of stimulus material, and convenient and simple data processing, which saves time and human resources. All methods have metric, ordinal scales that allow distinguishing three qualitative levels: high, medium, and low. All three methods are calculated for adults. With this in mind, they are not recommended for use with children and adolescents.

The formative experiment is the main research method that allowed testing the hypothesis about the positive role of virtual space in psychological support to the individual. The independent variable of the experiment is a set of psychological training using virtual space tools. The dependent variable of the experiment was the mental state of the subjects, the criteria of which were anxiety, depression, and reflection. Experimental and control samples were formed from Internet users.

Observation took place during the experimental work to determine the typical reactions of the subjects to the training influence in virtual space. This method allowed the identification of the dominant phenomena of the psyche during the influence of the training system.

#### B. Sample

*The sample* was formed on the basis of Ukrainian Internet users. The study involved individuals aged 18-60 years from all over Ukraine (except for the occupied part). The experimental sample was formed with 119 individuals, and the control group with 113 individuals. The total number of participants in the study was 232 subjects. The gender distribution of the sample: was 53.44% women (124 individuals) and 46.56% men (108 individuals). This approach ensures the representativeness of the study. The sample was formed based on communication with members of communities through social networks.

Information about the possibility of participating in scientific research and psychological training was posted on the pages of these communities and the personal accounts of the authors of the study. Thus, a wide range of network users were informed about the upcoming experiment. The samples were formed based on people who expressed a desire to participate in the research work and provided feedback. The quantitative composition of the samples is optimal for the execution of the set scientific tasks and the realization of the purpose of the experiment.

#### C. Data collection

The implementation of the experimental program and diagnostics were conducted by the authors of the article. The experimental influence involved the systematic implementation of distance training courses developed by

the Laboratory of Modern Information Technologies of Education of the G.S. Kostyuk Institute of Psychology of the National Academy of Educational Sciences of Ukraine on the Moodle platform [33] 2022-2023, a series of distance courses were implemented in the experimental group, which are presented in Table I.

Table I. The list of distance trainings of Laboratory of Modern Information Technologies of Education Institute of Psychology of the G.S. Kostyuk Institute of Psychology of the NAES of Ukraine

Course name	The purpose of the course	The course author	The average duration of the course
Training on communicative competence and successful communication	The formation of effective communicative competencies	Nazar	1-2 months
Training on the subjectness activity development of adult social network users.	Fostering motivation, independence, freedom of choice, responsibility, critical thinking, initiative, self-actualization, predictive thinking, and goal-setting as components of subjectness activity	Meshcheriakov	1-2 months
Training "Experience of Design"	Development of design competencies of personality	Ditiuk	1-2 months
Training on the intellect and creativity of adults	Intellectual and critical thinking self-development; development of metacognitive and reflection skills	Smulson	1-2 months
Video course on the formation of psychological self-help skills	Formation of skills for overcoming PTSD symptoms	Starkov	1-2 months

The trainings were conducted sequentially in a distance format under the supervision of qualified specialists. The number of participants in the training groups was 119 people. Thus, a comprehensive psychological impact on the civilian population was implemented in the conditions of war. The structure of training sessions is typical and includes a warm-up, main part, consolidation, and analysis of the acquired experience. The formative experiment is based on the assertion that training is a specific type of learning. This type of learning is based on creating a positive socio-psychological atmosphere in the group and implementing game tools. A positive aspect of the virtual environment is the maximum immersion in the developmental environment,

the multimedia nature of the interaction, and the possibility of optimal adjustment of the communication process.

Primary and secondary diagnostics were carried out online. The primary processing of diagnostic indicators was performed automatically. Such an approach allowed us to avoid the Pygmalion effect.

#### D. Data analysis

The data analysis entailed a comparative evaluation of quantitative indicators of primary and secondary diagnostics of the control and experimental groups. Using the SPSS program, the Student's t-test for dependent samples was calculated. Its use was conditioned by a prior check for normal distribution through the calculation of the Kolmogorov-Smirnov test. Thus, the significance of the differences in mental state under the influence of the experimental psychological support program in virtual space was revealed. For a clear demonstration of the identified quantitative trends, diagrams were created for each researched parameter. The conventional notations in the figures are the control group (CG), and experimental group (EG). The number indicates the ordinal number of the diagnostic examination: 1 – first; 2 – second; 3 – third. In this way, we can see the dynamics of the psyche of the subjects during the implementation of the system of psychological influence in virtual space. Pearson's linear correlation was used to determine the structural relationships between the studied components of the psyche at different stages of the study. This method allows the identification of changes in the internal structure of the studied psychological phenomena in the context of providing psychological support.

## IV. RESULTS

Let's analyze the data received.

Figure 1 presents the results of the anxiety diagnostics obtained during the experiment. We can see that during the war, the average indicators of anxiety among the civilian population dominate. In the control group, after six months, the low manifestations of anxiety increased by 18.59%. At the same time, the average indicators decreased by 17.7%. The high values of anxiety experience remained relatively stable. The third diagnostics, which was implemented after the completion of the study, showed an increase in the percentage of individuals with an average level of 10.62%. The number of subjects with a low level of anxiety significantly decreased by 20.36%. High indicators increased in 9.74% of the subjects in the control group. The identified changes are explained by external factors, particularly changes in public opinion at different periods of the war. Re-diagnosis shows a significant shift in low levels of anxiety (by 22.69%). The average values of the parameter decreased in almost a quarter of the subjects. The third diagnosis does not show significant changes compared to the previous examination. Changes in the experimental group are similar to those in the control group, indicating the role of an external social factor. At the same time, citizens

who participated in the training complex demonstrated stabilization of anxiety indicators compared to the experimental group.

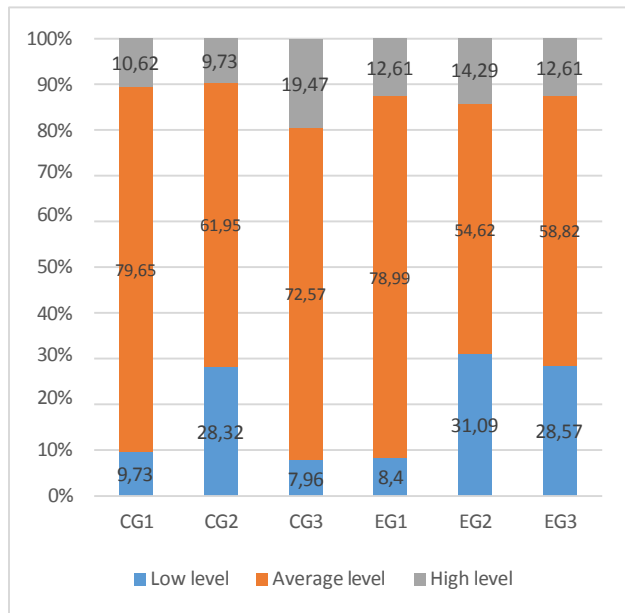


Fig. 1. Dynamics of anxiety indicators in the studied groups in the process of experimental influence

Trends in depression in the studied samples are presented in Figure 2. The initial diagnostics show a predominance of low and medium indicators of depression among the civilian population of Ukraine during the war. The repeated diagnostics examination allows us to record the stability of the percentage of individuals without symptoms of depression (22.12%) and with high indicators of the parameter (7.09%). The low indicators increased by 17.7%. At the same time, a similar difference is found for medium indicators of depression. The results of the third diagnostic survey show further changes in the trends of experiencing depression among the civilian population. In particular, the number of individuals without depressive symptoms decreases by almost a third. Low symptoms disappeared in 21.24% of the subjects. The average indicators increase by 29.21%. The number of individuals with high symptomatology of depression almost doubles. Thus, we note the destructive impact of the social situation during the war on the emotional sphere of the civilian population. The repeated diagnostics in the experimental group demonstrate trends similar to the control group. Thus, an increase in the number of persons with average indicators of depression by 11.76% is recorded. The percentage of subjects without depressive symptoms increases by 7.56%. In 17.65% of the experimental sample, the medium indicators decreased six months after the start of the training work. The number of individuals with a high level of depression remains without significant shifts. Changes detected during the third diagnostics do not show significant differences compared to the results of the previous examination. In general, tendencies similar to signs of anxiety were recorded: a decrease in indicators was observed after six months,

followed by their stabilization after the completion of training in the virtual educational space.

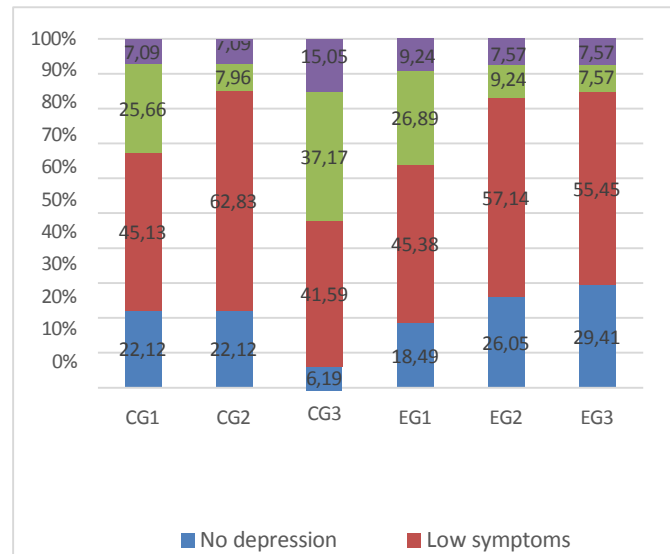


Fig. 2. Dynamics of depression indicators in the studied groups in the process of the experimental influence

Changes in the reflection indicators during the study are presented in Figure 3. As in the previous cases, the predominance of the average indicators of the parameter is recorded. Primary diagnostics recorded manifestations of average reflection values in approximately 60% of the studied citizens. As in the previous cases, the predominance of the average indicators of the parameter is recorded. The primary diagnosis recorded the average values of reflection in approximately 60% of the studied citizens. The extreme values of the characteristic were distributed roughly equally. It should be noted that the results of all three diagnostic examinations in the control group revealed the stability of manifestations of the ability to self-analysis. In the experimental group, repeated diagnostics did not reveal significant changes in reflection. Data collection after the completion of the study showed significant shifts. In particular, an increase in the percentage of individuals with high reflection indicators (by 32.77%) was found. The average values decreased in 19.32% of the sample, and the low ones in 13.45%. It can be stated that the complex training conducted in a virtual space was most effective in forming the reflection of the subjects.

To justify the use of significance criteria for differences, a normality test of the distribution of the data under study was conducted using the Kolmogorov-Smirnov criterion. The obtained results are presented in Table II. We see that the asymptotic significance in all cases exceeds the value of 0.05. In light of this, the distribution of all statistical series corresponds to the Gaussian curve, which determines the appropriateness of using the Student's t-test in the study.

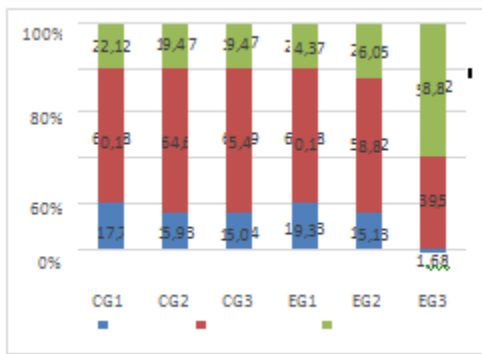


Fig. 3. Dynamics of reflection indicators in the studied groups during the implementation of experimental influence

Table II. Indicators of the Kolmogorov–Smirnov criterion by research parameters

Asymptotic significance	Statistical series					
	First diagnostics (control group)	Second diagnostics (control group)	Third diagnostics (control group)	First diagnostics (experimental group)	Second diagnostics (experimental group)	Third diagnostics (experimental group)
Anxiety	0,873	0,344	0,467	0,313	0,484	0,299
Depression	0,111	0,234	0,942	0,198	0,290	0,775
Reflection	0,776	0,741	0,879	0,582	0,581	0,575

Let's analyze the Student's t-test coefficients for dependent samples obtained in the control group (Table III).

Table III. The value of the Student's t-test in the control group

The studied parameters	Student's t-test		
	Comparison of the results of 1 and 2 diagnostics	Comparison of the results of 2 and 3 diagnostics	Comparison of the results of 1 and 3 diagnostics
Anxiety	2,341*	2,123*	2,004*
Depression	1,999*	3,822**	3,104**
Reflection	1,379	1,514	1,428

It should be noted that differences between the results of three diagnostic procedures were revealed. All three indicators for the anxiety parameter indicate significant differences ( $t=2.341$ ;  $t=2.123$ ;  $t=2.004$ ). In all three cases, the significance of the differences is at the level of  $p=0.05$ . Significant differences between the results of the first and second depression diagnostics were recorded at the level of  $p=0.05$  ( $t=1.999$ ). The other two coefficients for indicators of depression ( $t=3.822$ ;  $t=3.104$ ) are at the level of significance of  $p=0.01$ . We can speak of significant transformations in the experiences of depression by the civilian population over the last six months of the war. All coefficients for the reflection parameter in the control group ( $t=1.379$ ;  $t=1.514$ ;  $t=1.428$ ) do not indicate significant differences.

The results of the Student's t-test calculation based on the experimental sample data are presented in Table IV. The anxiety indicators changed six months after the

implementation of the remote training program ( $t=2.456$ ;  $p=0.05$ ). No relevant difference was found between the results of the second and third anxiety diagnostics. A similar trend in the experimental group is observed for the depression parameter. Reflexivity did not significantly change according to the repeated diagnostic indicators ( $t=1.771$ ). However, other coefficients indicate significant transformations in the structure of reflexivity of the subjects after completing the distance courses ( $t=4.221$ ;  $t=3.929$ ;  $p=0.01$ ).

Table IV. The value of the Student's t-test in the experimental group

The studied parameters	Student's t-test		
	Comparison of the results of 1 and 2 diagnostics	Comparison of the results of 2 and 3 diagnostics	Comparison of the results of 1 and 3 diagnostics
Anxiety	2,456*	1,309	2,594*
Depression	2,311*	1,888	2,222*
Reflection	1,771	4,221**	3,929**

To determine changes in the internal structure of the emotional sphere of the subjects, Pearson's correlation analysis was conducted. It should be noted that the letters in the correlation matrices denote the studied parameters: A – anxiety, D – depression, and R – reflection. The indicators of the control group are presented in Table V. It was found that throughout the entire study period, there are significant direct correlations ( $p=0.01$ ) between depression and anxiety ( $r=0.453$ ,  $r=0.433$ ,  $r=0.401$ ). This indicates the complexity of the emotional problems experienced by the civilian population during the war. At the same time, reflection does not have significant correlations with negative emotional symptoms. This trend persists throughout the entire period of the formative experiment.

Table V. Pearson's correlation coefficients in the control group

The studied parameters	Pearson's correlation coefficients								
	1 diagnostics			2 diagnostics			3 diagnostics		
	A	D	R	A	D	R	A	D	R
A	1	0,453**	0,032	1	0,433**	0,022	1	0,401	0,032
D		1	0,066		1	-0,076		1	0,002
R			1			1			1

Table VI presents the changes in the studied parameters in the experimental group. The first diagnostics demonstrated significant correlations between depression and anxiety ( $r=0.501$ ). The second empirical cut shows a decrease in the significance of this correlation to  $p=0.05$  ( $r=0.195$ ). The final diagnostic indicates the absence of a significant correlation between depression and anxiety. At the same time, there is a trend of a gradual increase in the correlation of reflection with anxiety and depression. Thus, at the end of the formative experiment, significant inverse correlation coefficients were found between these parameters at the



level of  $p=0.01$  ( $r=-0.342$ ,  $r=-0.387$ ). The results suggest that after conducting training sessions in the virtual environment, the cognitive control of the emotional sphere of the subjects significantly improved.

Table VI. Pearson's correlation coefficients in the experimental group

The studied parameters	Pearson's correlation coefficients								
	1 diagnostics			2 diagnostics			3 diagnostics		
	A	D	R	A	D	R	A	D	R
A	1	0,501**	0,009	1	0,198*		1	0,112	-0,342**
D		1	0,002		1	-0,202*		1	-
R			1			-0,195*			1

The observation results suggest that during the training sessions, the subjects minimally demonstrated anxiety and depression. Such trends are explained by the immersiveness of the virtual space of psychological training. Thus, the participants were distracted from reality, which caused negative emotional manifestations. However, the emotional state of the subjects was indirectly expressed in the desire to continue work and implement training tasks. The reflection of the training participants developed from learning the algorithms of self-analysis and projecting activities to their creative understanding and individualization.

## V. DISCUSSION

The analysis of the research results confirmed the hypothesis about the possibility of reducing anxiety, and depression, and developing reflexivity among the civilian population in wartime conditions through the organization of psychological support in virtual space. The explanation of trends in anxiety and depression indicators in the control group deserves special attention. Thus, the repeated diagnostics, which took place in the spring of 2023, showed a decrease in negative emotional experiences among the civilian population. This is explained by the adaptation of citizens to the conditions of war. In addition, during this period, positive expectations regarding future events at the front were recorded, which could also improve the emotional state. The diagnostics conducted at the end of 2023 showed an increase in anxiety and depression. The identified trend is explained by the disappointment of the civilian population regarding the situation at the front and the social situation in the country. In particular, negative public sentiments have increased due to the unfulfilled expectations of victory from the summer military operations. It is worth noting that Ukrainian society is in a state of constant information warfare, the goal of which is to stimulate public disillusionment by increasing anxiety and depression. At the same time, conducting distance training in a virtual space allowed for stabilizing the emotional indicators of personality and avoiding further destructive tendencies. Changes in reflexivity as a metacognitive integrator of intelligence reflect the transformation of the

subjectness of personality, [8]. No significant shifts in the studied parameter occurred in the control group. At the same time, the experimental impact demonstrated effectiveness in forming the reflexivity of Ukrainian citizens. Overall, the system of training conducted in virtual space was more effective in forming reflexivity compared to the impact on the emotional sphere. We confirm the thoughts of other researchers about the positive role of virtual space in the implementation of psychological influence measures, [29].

We agree with the thoughts on the advantages of psychological support in virtual space [11]. At the same time, it is worth noting that while overcoming traditional psychological barriers, the network environment generates new obstacles, particularly related to the technical competence of its users and the symptomatology of internet addiction. In the context of the situation in Ukraine, the study of psychological support to war veterans on the Internet is noteworthy, [10]. It is also appropriate to consider the possibilities of systemic psychotherapeutic influence in virtual space, [12]. The study of the possibilities of artificial intelligence in providing psychological support to the personality is also promising, [27]. The obtained data on the relationship between the emotional state of the population and the informational aspects and realities of the war open up opportunities for optimizing psychological assistance programs. Thus, appropriate psychological interventions should be accompanied by exercises aimed at developing the population's information literacy. This approach will allow for a more balanced perception of information flows and potentially reduce the negative impact of news about events on the front.

Our study has highlighted the importance of establishing optimal group dynamic processes to enhance the effectiveness of a virtual community providing psychological support. It is also important to consider the communication skills and individual characteristics of the participants in the training work on the network, [22]. A separate direction of the psychologist's work with members of the virtual community is to stimulate their activity motivation [23] and the system of positive emotional connections, [24]. We agree with the thoughts on the relevance of setting the goals of the community's activity and forming a value structure, [25].

*Limitations.* The research did not study the specifics of conducting the used psychological training in non-virtual interaction. Obtaining such data will make it possible to more clearly interpret the possibilities of psychological support of the individual in the virtual space.

## VI. CONCLUSION

The relevance of the researched topic is related to the need to find new ways of psychological support for Ukrainian citizens in wartime conditions. The hypothesis about the possibility of reducing anxiety, depression, and developing reflexivity among the civilian population in wartime

conditions through the organization of psychological support in a virtual space has been confirmed. A dependency of anxiety and depression indicators on military events and their perception in society has been revealed. It has been established that conducting distance training in a virtual space allowed for stabilizing the emotional indicators of personality and avoiding further destructive tendencies. The most effective organization of virtual psychological influence turned out to be in the direction of developing reflexivity. During the study, changes occurred in the structure of mental reactions: after the experiment, reflection became more significant for controlling negative emotional manifestations. The key characteristic of the virtual environment that ensures the effectiveness of psychological training is immersiveness. The obtained results can be used in the activities of practical psychologists and psychotherapists. In particular, it is appropriate to change the treatment programs for depression and anxiety considering the possibilities of virtual space. This is particularly relevant in the context of maintaining security needs in extreme situations. The obtained results can also be used to develop strategies and tactics to counter the impacts of information warfare. Additionally, the results indicate ways to optimize the socialization of individuals in the information space during wartime. Our research findings are significant in the geopolitical context, specifically in terms of understanding ways to provide psychological support to the population during military conflicts. Further research prospects are seen in the development and testing of the effectiveness of psychological support programs on the Internet for military personnel and war veterans. The creation of programs for the cognitive development of the civilian population in war conditions is also relevant.

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