

# IS SCIENCE POSSIBLE UNDER OCCUPATION? REFLECTION AND COPING STRATEGY

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## Abstract

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Science holds the key to the progress and development of any country. The full-scale war of the Russian Federation against Ukraine makes some adjustments to the possibilities of scientific activity. To some extent, it depends on the regional context, since the territory of Ukraine is conditionally divided into three zones: 1) territories that had/have active hostilities; 2) regions that do not have the direct escalation of hostilities; 3) temporarily occupied territories. Our research highlights the impact of the Russian-Ukrainian war on the research activity at the university that has been under temporary occupation. Quantitative and qualitative analysis of the results of the scientists' survey and included observation allows one to determine the main problems and challenges faced by scientists in occupation conditions. It was determined that in the conditions of occupation, scientists not only lack access to the necessary equipment but are also subject to moral and psychological pressure. However, understanding the meaning and value of one's scientific achievements for the victory and post-war recovery of Ukraine, the support of the world scientific community inspires creation even in the moment of hardships.

**Keywords:** War, Occupation, Science, University

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## 1. INTRODUCTION

The #ScienceForUkraine grassroots initiative published a report in response to Russia's full-scale war against Ukraine, which suspended the activities of

Ukrainian scientists and motivated the initiative to help them (Rose et al., 2022). More than 130 individuals from all over the world have joined the initiative in order to improve cooperation with politicians and financial authorities, and to create

a central database for scientific assistance offered to Ukrainian scientists. #ScienceForUkraine was launched on February 26, 2022 — two days after the beginning of Russia's full-scale invasion. Activists of this movement understood the need to respond immediately to the emerging needs of the Ukrainian academic community. In general, #ScienceForUkraine has representation in 32 countries around the world and has joined many scientific institutions in the education and business sectors that create and distribute support programmes for Ukrainian scientists. In our opinion, it is recognised, without exaggeration, as a great and highly needed initiative. And this is just one example of a centralised initiative, there are many such programs today. But does this ensure the activity of resumption of the Ukrainian scientists already during the war? At what level is the activity of Ukrainian scientists? What impact does the war have on the functioning of the Ukrainian scientific infrastructure? We will probably get answers to these questions a little later when it will be possible to determine (in quantity and quality) the Ukrainian scientific and technical products created during the war.

The rest of the paper is structured as follows. Section 2 presents a literature review. Section 3 provides a description of the research methodology. We describe and discuss the findings in Section 4 and Section 5, and Section 6 concludes the paper.

## 2. LITERATURE REVIEW

Today we deal with the nascence of certain reports that concern the requirements and demands of Ukrainian scientists (Duszynski & Molly, 2022), and the functioning of scientific and higher education institutions in Ukraine. However, the portrait of the Ukrainian scientist during the war can only be in the regional context (Boglaienko, 2022; McNutt & Hildebrand, 2022; Moroz, 2022). Today, the map of Ukraine is conditionally divided into three parts:

- 1) territories that had/have active hostilities;
- 2) regions that do not have the direct escalation of hostilities;
- 3) temporarily occupied territories.

Those regions that do not suffer from active hostilities have been able to resume their activities rather quickly. Scientists, recovering from the first shock of the war, have returned to their workplaces and were able to continue their previously started research. Cities that deal with active hostilities or cities, which are close to them suffered the greatest destruction. A recent study published in *Nature* indicated that, as of January 20, 2023, 91 research and higher education institutions were affected, and 4 were completely destroyed (Irwin, 2023).

The Russian military destroyed many universities and scientific institutions. Some of the institutions that have not been destroyed remain at constant risk of destruction. These institutions cannot continue their activities in their usual format, many scientists have left for safer cities in Ukraine or moved abroad. About 6000 scientists are reported to have left Ukraine during the war ("Rebuilding Ukrainian science", 2023).

In the study devoted to the impact of the war on the scientific activity of Ukrainian universities, the main stress factors are highlighted, including

psychological discomfort, financial problems, and the inaccessibility of research materials (Fiialka, 2022). The psychological state of Ukrainian scientists is also discussed in the study by Kurapov et al. (2022). Thus, the authors emphasise that 97.8% of the respondents reported a significant deterioration of their psychoemotional state. Previous research also shows the significant impact of war on civilian mental health (Hanson & Vogel, 2012; Garry & Checchi, 2020; Borho et al., 2020). Free access to research databases and laboratories is among the main needs of scientists for scientific activity during the war (Polishchuk et al., 2022), because a large number of universities today exist only in a virtual format (Suchikova & Tsybuliak, 2023). The world is actively helping Ukrainian science overcome the challenges of the war (Maryl et al., 2022). Such unprecedented support completely changes the architecture of scientific interactions and changes, without a doubt, the whole world (Morrice, 2022).

Ukrainian scientists are trying, for their part, to continue working and rebuilding the country's scientific infrastructure, often on a volunteer basis (Lutsenko et al., 2023). Poskett and Shaw note that "In the face of the ongoing Russian invasion, academics in Ukraine and their supporters have shown tenacity and creativity to continue working in their country and elsewhere" (Poskett & Shaw, 2022, p. 244).

However, the occupied territories always remain outside the frame. Kherson, Donetsk, Luhansk, and part of the Zaporizhzhia region were occupied by Russian invaders. These regions do not have active hostilities and life seems to be calm. Russian invaders create the illusion of safety. And what about science? Is it possible to work for a scientist or faculty member in occupation? What problems and challenges do they face?

In this research, we present our own experiences and reflections on science in occupation. The city in which the Berdyansk State Pedagogical University (BSPU) is located has been occupied since the first days of the war. For almost two months, the university operated under occupation conditions. Subsequently, the decision was made, and the university was temporarily relocated to Zaporizhzhia, which is under the control of Ukraine. We also reflect on the coping strategies and the challenges by Ukrainian scientists, in particular, due to the manifestation of resilience, indomitability, and faith in victory.

## 3. METHODOLOGY

### 3.1. Institutional and city context

The Berdyansk State Pedagogical University prepares teachers for the Northern Azov region. It is located in Berdiansk, which is known to be a small resort city, and BSPU is considered the town-forming institution. The BSPU staff consists of 500 employees who provide the training of nearly 4000 specialists. Faculty members of the BSPU carry out scientific research in the field of educational, historical, material, mathematical, economic, behavioural sciences, etc.

On the first day of the war, Berdiansk woke up to powerful explosions near the military unit and the airport. According to the order, the faculty

members and students did not attend the university. On February 27 the occupational authorities entered Berdiansk and the city was occupied. It was impossible to carry out educational and scientific activities in such a situation. It was decided to suspend the educational process. It should be noted that in the first weeks of the war, all universities in the country had a similar situation.

However, the activity of the university is not only the training of students. A university is an institution that performs scientific, financial, and economic activities, etc. The administration and some of the service personnel continued to go to university, risking their own lives.

On March 1, 2022, armed Russian invaders entered the rector's office and, he was taken away (with the bag on his head and at gunpoint) for a conversation with representatives of Russia's Federal Security Service (FSB). In face of death, the rector did not give up Ukrainian national values, he answered to Russian invaders: we've gotten used to freedom and democracy. We know the sweet taste of freedom of our thoughts and choices, and we'll never change it on the three-coloured flag (Ihor Bohdanov: "My znaємо solodkyi smak svobody", 2022). After a while, the rector of BSPU was released. Understanding the danger to which the academic staff of higher education institutions (HEI) and their families are exposed, the procedure of temporary relocation of the university has started.

During the occupation, the university was in danger. Scientists left the city under shelling, saving the lives of their relatives, and children abandoned their homes, in which the occupiers either settled their people or destroyed everything there. In a new city, they found themselves without their own home in new living conditions. Accordingly, they feel the limitation of their own budget as a result of relocation and have to adapt to the new social, cultural, and domestic conditions. This requires significant internal and time resources.

It is a very difficult situation for those scientists who stayed in the occupied town because of certain personal circumstances. Some of the faculty members who remained in the city were captured: the faculty member and conductor of the orchestra of the Department of Theory and Methods of Teaching Artistic Disciplines of BSPU; the commandant of the students' dormitory; the head of the university's information and computing department.

Therefore, we researched to assess the impact of wartime occupation on BSPU scientists. The purpose of our study was to identify the key challenges and difficulties faced by scientists in such settings. The methodology and results of the study are presented below.

### 3.2. Participants

In the research, we involved 172 university scientists of all ages and with different academic degrees. Respondents agreed to participate in this research, but for safety reasons, the research was carried out anonymously. Table 1 summarises the data of the participants.

**Table 1.** Characteristics of the participants

Variable	Subcategory	%	N
Age	< 35 years old	19.8	34
	35-50 years old	44.8	77
	51-60 years old	26.2	45
	> 61 years old	9.3	16
Researcher career stages in Ukrainian university	Doctor of Science	15.7	27
	Ph.D. degree	61	105
	Master degree	23.3	40

### 3.3. Instrument and procedure

The research team developed a questionnaire for university scientists. The questionnaire contained 10 questions (9 closed, 1 open-ended), in particular:

1. Has your location changed since the full-scale war in Ukraine?
2. Do you feel safe?
3. Did the full-scale war prevent you from completing your previous scientific research?
4. Assess the quality of the Internet available to you.
5. Have your scientific interests changed after February 24?
6. Evaluate your scientific activity during the period of forced vacations and vacations due to the large-scale war in Ukraine.
7. Evaluate your scientific activity after the temporary relocation of the university and the resumption of its activities.
8. What factors negatively affect your research work?
9. What factors positively affect your research work?
10. In your opinion, on what topic of scientific research should the scientists of our university focus in order to contribute to the victory of Ukraine?

Before using this tool, 21 scientists who did not participate in the research were tested. The scientists were selected taking into account the different academic degrees, ages, and the safety situation in which they were. All suggestions and recommendations from the participants were integrated into the final version of the questionnaire.

Subsequently, we administered a questionnaire to the research participants using Google Forms. All participants agreed to use the data in the study in a generalised form. The data collection process lasted about a week. The short time frame for data collection was due to the safety situation, which required taking real actionable steps to overcome the identified problems in the context of the full-scale war in Ukraine and the temporary occupation of the city, and the temporary relocation of the university.

We must mention that the key source of information was opinions and experiences. Therefore, the answers received were supplemented with the authors' observations, individual interviews with the participants, or their documented stories. It gave us an overall picture and a deeper understanding of their personal experience.

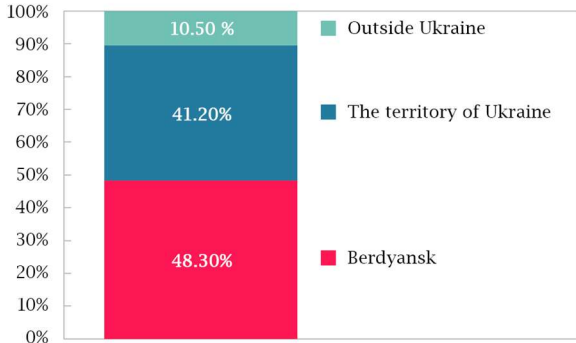
## 4. RESEARCH RESULTS

### 4.1. Location and feel of the safety

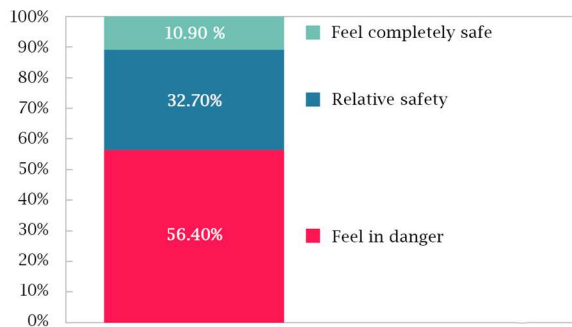
Figure 1 represents the range of responses. At the time of the survey, almost half, that is 48.3% (n = 83) of the BSPU surveyed scientists still live in

Berdiansk (Figure 1). A significant percentage of the survey respondents 51.7% (n = 89) left their permanent residence, and 18% of them moved abroad. The rest stay on Ukrainian territory.

**Figure 1a.** Current place of stay of the interviewed BSPU faculty members



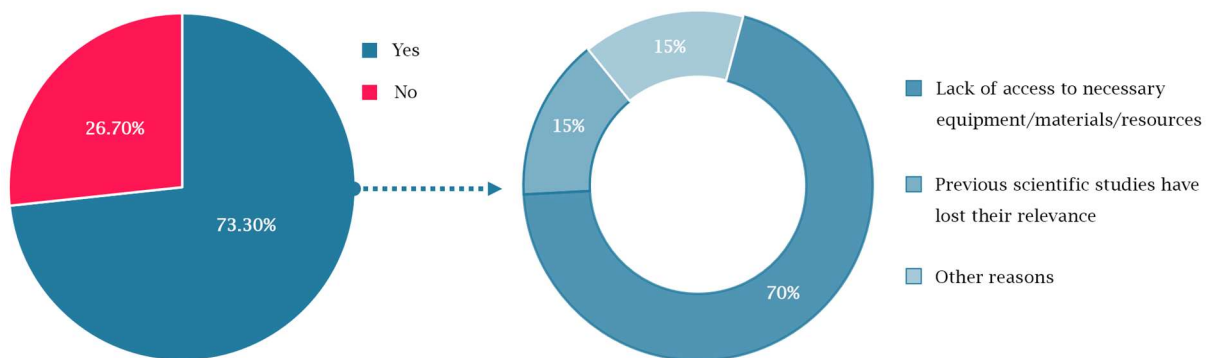
**Figure 1b.** The perceptions of the interviewed BSPU faculty members of their own safety



Those scientists who stayed to live in the occupation stated the following reasons for their choice:

- P.1. "I cannot leave my family alone".
- P.2. "I have elderly parents, they cannot survive the evacuation".
- P.3. "I'm afraid to leave. This is too dangerous".
- P.4. "I don't know where to go".

**Figure 2.** Respondent's answers to the question "Did the full-scale war prevent you from completing your previous scientific research?" and "How exactly?"



In fact, during the first days of the occupation, the city of Berdiansk was on the edge of a humanitarian crisis. The gas supply was destroyed and this led to extremely cold temperatures within

P.5. "My financial situation will not allow me to rent an apartment in another city".

P.6. "Nowadays, all cities of Ukraine are unsafe to live in".

P.7. "I believe in a quick victory and the de-occupation of Berdiansk, so I will wait for the liberation here".

It should be noted that temporary relocation from the university does not mean compulsory relocation of each employee to the place of relocation. The COVID-19 pandemic, which preceded the war, taught humanity to work remotely. Currently, only 15% of the BSPU staff are physically located in Zaporizhzhia. Those scientists who live in the occupied Berdiansk continue to work at the BSPU in a remote regime.

The survey on the subjective sense of security shows that 56.4% of the BSPU scientists feel in danger, another percentage of respondents 32.7% are in relative safety, and only 10.9% of survey participants feel completely safe (Figure 1b). The data received are correlated with the places of living. The red level of danger is for those scientists who live in the occupation. Besides, such a level of danger as those who live now in Zaporizhzhia, which is currently recognised as a front-line territory. Scientists who moved abroad feel completely secure.

#### 4.2. The impact of the war on scientific research started before the war

The answers to question 3 "Did the full-scale war prevent you from completing your previous scientific research?" are presented in Figure 2. Of the entire sample, 73.3% of the respondents responded that the war did not allow them to complete the research they had started earlier (Figure 2). Among them, 88 scientists cited a lack of equipment, materials, and resources as the main reason for this. Another 19 faculty members noted that their previous scientific research had lost relevance (Figure 2). Some scientists replied that they could not think about science and conduct scientific research during the war.

our apartments. Additionally, many areas of the city had no electricity for some weeks due to overvoltage from the power systems. Food, medicines, and hygiene products were not delivered to the city.

There was complete isolation from the outside world. At the operational Zoom meeting for the deputy deans on the scientific work of the faculties, which was devoted to monitoring the current situation of the members of the scientific activity of BSPU faculty, one of the scientists said: *"I wander the city stores all day in search of food for my family. Do I have time to think about science now?"*.

Furthermore, the BSPU management prohibited faculty from coming to the buildings due to extreme danger to their lives. At any time, there was a threat to meet there with armed invaders. Cases of abduction of people and holding them captive became more frequent. Therefore, scientists were completely deprived of the opportunity to work in their laboratories.

Among other reasons, the respondents also mentioned the following: psychological state; financial distress; lack of opportunity to communicate with the scientific supervisor; lack of stable Internet connection; termination of grant funding.

#### 4.3. Access to the Internet

Access to the Internet is one of the most important conditions for performing a scientific activity. This

is so because modern scientists cannot imagine the possibility of working without constant access to a stable Internet connection. During the war, residents of Ukraine faced the problem of a lack of internet connection. Such a problem is usually associated with two factors:

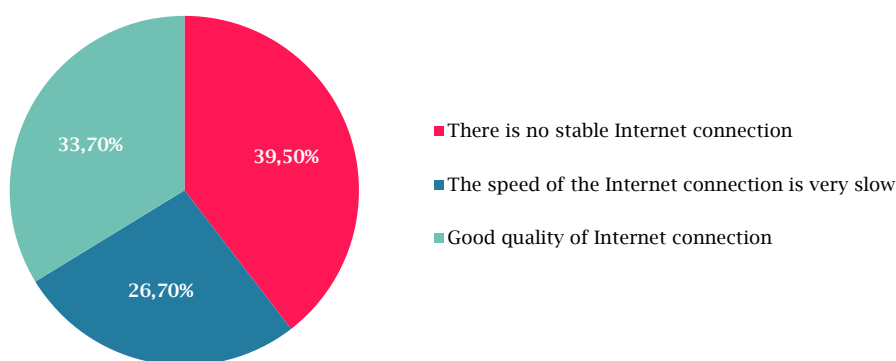
1) in the territories where active hostilities are taking place, power lines may be interrupted, power stations of mobile networks, and the Internet may be destroyed;

2) in the territories that are temporarily occupied, the Internet is turned off on purpose, blockers of mobile, cellular, and satellite communication, and wireless Internet are installed.

This factor makes it impossible for scientists who stay in the territories of active hostilities and adjacent to them, as well as in temporarily occupied territories.

Since access to the BSPU building and material and technical base posed a potential danger to university scientists/researchers because of the occupation by Russian invaders, access to the Internet remains almost the only tool for continuing scientific work at their current places of residence. Only 35.5% of the respondents responded that they have a stable Internet connection (Figure 3).

Figure 3. Internet availability for scientists of the BSPU



The Internet provider's network lines, which provided Internet access to most of the city's residents, were destroyed in the first week of the Russian invasion due to active hostilities near Berdiansk. At the same time, the mobile connection disappeared. For more than a week, the city was completely isolated from the news.

*"We didn't know what was happening in Ukraine and the world. Maybe the war was over? Who is the winner?"* — this is how the townspeople describe the situation. People went to the city centre to exchange ideas, and to hear some news from those who came from the suburbs, where communication was not jammed. BSPU faculty members, who were in Berdiansk at that time, describe their feelings in the following terms:

P.8. *"Information isolation kills me"*.

P.9. *"This is even worse than the lack of food"*.

P.10. *"I didn't think I had such an addiction to the Internet and the news"*.

P.11. *"I have the same feeling as drug addicts"*.

P.12. *"To find out how my parents feel, I have to walk several hours every day. Earlier I needed just phone talk for a minute or so"*.

This was the first case of a complete disconnect between the Internet and mobile communications in the city of Berdiansk. Such disconnections took place regularly during these 6 months of the war; the residents of the city began to get used to it.

Access to the Internet is recognized to be a crucial factor for performing any scientific activity. The lack of the Internet was the impetus for many scientists to leave Berdiansk. Others, in contrast, cannot leave the city and their relatives precisely because of this factor: *"If I leave Berdiansk... How will I know that my old mother is alive and well? I will not be able to call and hear her voice"*.

Currently, only Russian Internet providers and mobile operators work in Berdiansk. The speed of the Internet connection remains extremely slow. Due to systematic breakdowns at the trunk provider, the connection is very unstable and often disappears completely. Internet providers do not give any guarantees about the time it will take to complete repair work and constantly increase the prices of their services. Even Google does not work without a VPN.

The Russian invaders stole the servers which host the BSPU website. Scientists were deprived of the opportunity to use the repository and the electronic library fund. Later, the university website was relocated to the “cloud environment”, but the repository still does not work. The scientists of BSPU described their feelings and readiness to engage in their scientific research in the absence of the Internet connection as follows:

P.13. “How can I write an article when I cannot even read current research?”

P.14. “I am outraged because scientists from other universities have the opportunity to work with Research4Life, SciVal, Elsevier, etc. for free, but I cannot even get access to the university website”.

P.15. “I couldn’t take part in the symposium. I had been preparing for it for a year”.

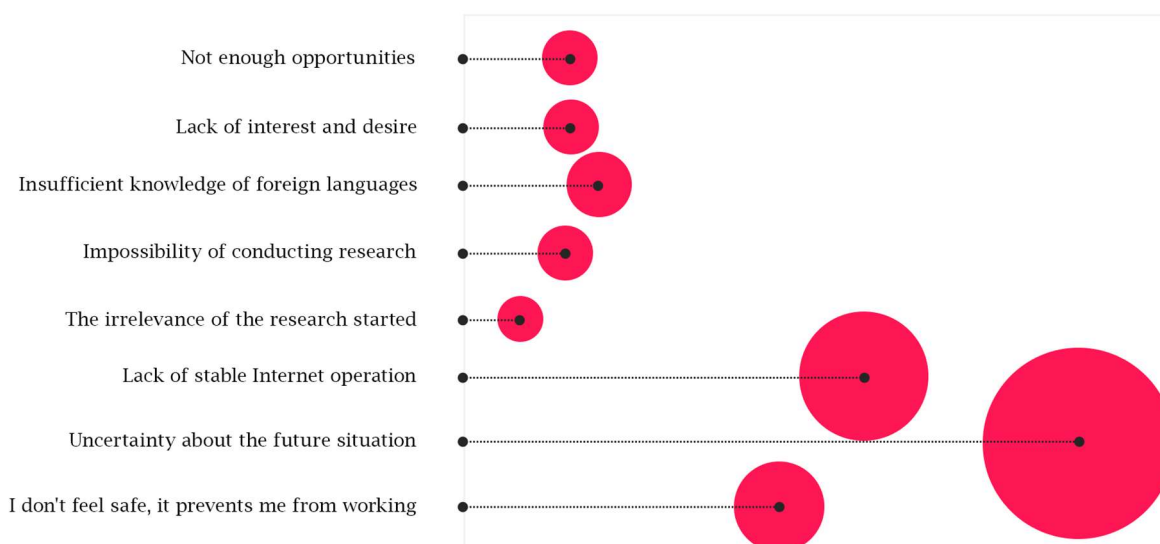
P.16. “I was preparing the application form for the grant, but the Internet disappeared and I missed the deadline and now am very disappointed”.

P.17. “The collegial university body had to decide on awarding me the academic title of associate professor, on that day the Internet disappeared in Berdiansk. We could not gather a quorum. I was very upset”.

#### 4.4. Factors influencing scientific activity and changing scientific interests

According to the survey data, uncertainty about the future situation has the greatest negative impact on scientific and research activities, in particular, this factor is the most significant for 76.2% of the respondents (Figure 4). Furthermore, the significant impact has the non-stable Internet connection and the sense of danger for 51.2% and 41.9% of faculty members correspondingly. The respondents also mentioned the following factors: lack of living conditions (workplace), lack of time, a small child, etc.

Figure 4. Preventing factors to be engaged in scientific activities



It should be noted that 75% of the faculty members are women. This is due to the pedagogical orientation of our high educational institute. What does it mean in the context of our research? In the occupied Berdiansk, most of the men lost their jobs, because all the companies stopped their work or were seized by the occupation authorities. Many men joined the Ukrainian army to defend the state. Therefore, women scientists had additional social roles and obligations:

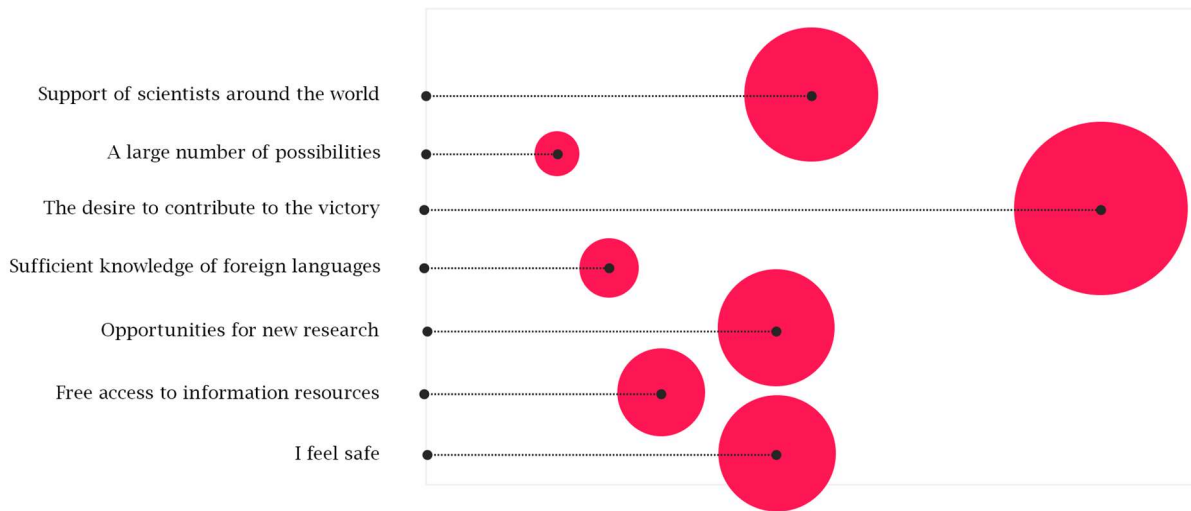
- most of them remained the only breadwinners in the family;
- kindergartens and schools stopped working and women have to take care of their children 24/7;
- the restoration of the educational process at the university led to an excessive educational load.

Science does not tolerate unsystematic activity. The scientific process requires concentration and total immersion. Unfortunately, our scientists are now almost deprived of this.

In such circumstances, asking about the factors that positively affect the preservation of scientific activity seems a little cynical to us. Nevertheless, we dared to ask such a question, knowing of the indomitable spirit and diligence of our scientists. They underlined in the survey that the desire to contribute to the victory is the greatest factor, which motivates them to continue their scientific research work (Figure 5), 51.7% of the respondents preferred this factor. In addition, they named such factors: support from scientists around the world; opportunities for new research; feeling of security.



**Figure 5.** Factors, which have a positive impact on scientific activity

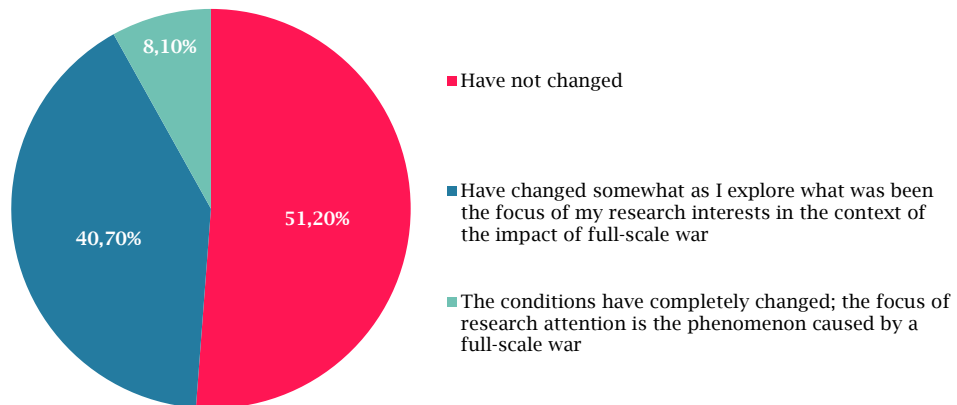


Surprisingly, a large number of new opportunities and knowledge of a foreign language were not dominant factors that stimulate continued scientific research. We believe that this is primarily due to the desire of scientists to stay in their country during the war and to work on the development of the national and university scientific infrastructure.

Half of the respondents who answered the question “*Have your scientific interests changed after February 24, 2022?*” mentioned that their

scientific interests have not changed and they continue to work on the same research problem (Figure 6). Another 70 respondents responded that they continue to work on their research problem, but conduct research in the context of the impact of a full-scale war. 13 scientists responded that they had completely changed their scientific interest since the beginning of the war. Now the focus of their research interests is on the phenomena caused by full-scale war.

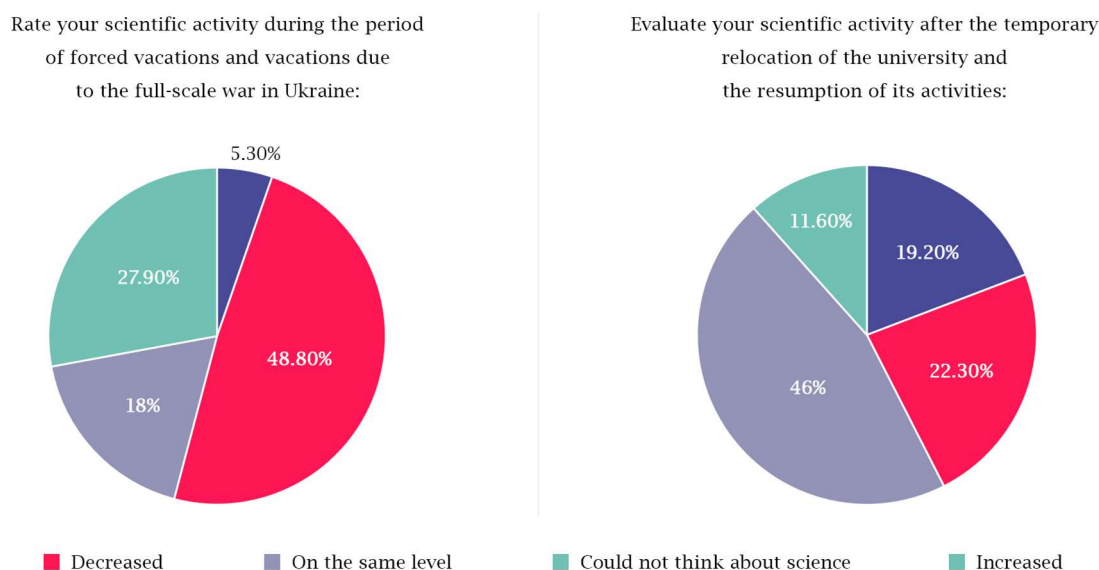
**Figure 6.** Changing the focus of research interests



**4.5. Subjective assessment of scientific activity**

Figure 7 represents the range of answers. During the first months of the war, the level of scientific activity, according to the subjective assessment of

the respondents, decreased significantly (Figure 7a). Therefore, only 18% of the respondents answered that their scientific activity remained at the same level, and only 9 scientists noted that the level of their scientific activity increased.

**Figure 7.** The level of scientific activity of BSPU faculty members before and after the university relocation

After the temporary relocation of the university and the resumption of its activities at the new location, the situation changed (Figure 7b). Only 60 faculty members have not been able to restore the level of their scientific activity; 20 of them (11.6%) feel that they are completely unable to engage in scientific activity. Another 40 respondents noted a decrease in scientific activity (which means that they continue to engage in scientific activity, but with less efficiency). Another percentage of respondents (45.9%) noted that the level of their scientific activity reached pre-war indicators, and 33 respondents even noted an increase in this index.

We can state that university relocation is recognised as a key factor in the restoration of the educational process. It demonstrates that the temporary university relocation is important for scientists, as it allows them to be sure of the continued necessity of their work and of receiving a monthly salary for their work. And for this, they can overcome various difficulties and look for new opportunities.

However, such positive dynamics show that scientists have begun to adapt to new realities and use the opportunities offered by the scientific community around the world to 'reboot' their own research activities. Because of this, scientists began to work more actively to create scientific collaborations to jointly write applications for grants, scientific projects, and articles.

## 5. DISCUSSION

Science holds the key to the progress and development of any country. Therefore, it is not by chance that Russia purposefully destroys many scientific institutions during a full-scale war in Ukraine (Duszynski & Molly, 2022). We agree that physical destruction has terrible consequences for the ability to conduct scientific research. However, our research reveals another aspect of the military actions of the aggressor state, the terrorist state, focussing attention on the moral and psychological pressure that scientists under occupation are under.

The safety situation is a significant demand for the professional development of the personality (Benson et al., 2020). Scientists, who live in the occupation, do not have such safety. Although scientists are not directly related to war and state secrets, the experience of Ukrainian scientists demonstrates that the intellectual elite is very important.

The silence of occupied cities, isolation from the world, and even from each other, can paralyse any activity. Science and creativity cannot exist in chains. It is terrible to see the horror, but it is also terrible when you do not see, do not hear, and do not speak when overwhelmed by various emotions. Thousands of Ukrainian scientists who continue to live in occupied cities of Ukraine found themselves in such conditions. This discourse must be raised. Now is the time to talk about the enslaved elite of our society. We have read about the Middle Ages in history textbooks, but right now the country terrorist makes the same with the population of the occupied cities. They kidnap our scientists, intimidate them, and force them to cooperate with them.

It is worth mentioning one more method of moral pressure: the destruction of the scientific output of universities, which has been developed for decades. On the Internet, you can find videos where Russian invaders ravage, destroy, and ruin the library of BSPU. They considered this literature "extreme, terrible, and dangerous". Ray Bradbury's prophecies are coming true, the totalitarian fake regime is afraid of the truth, and all truth must be destroyed: "So now do you see why books are hated and feared? They show the pores in the face of life". (Bradbury, *Fahrenheit 451*).

Below is the dialogue of our Berdiansk writer Natalia Humen (who escaped from the occupation) with her mother, who has stayed in occupied Berdiansk. She has posted it on Facebook (Humen, 2022) (in dialogue: NG — writer, M — mother):

"M: Daughter, I didn't want to tell you, but I am so glad you managed to leave...

NG: Mom, tell me.



*M: Dad and I had breakfast. Someone knocked on the door. I told my father to keep silent and that I would tell him that he was deaf-mute. Three men with assault rifles stood near the door... One of them took out a notebook and began to tell everything about you, where and with whom you work, what is your profession, how old you are, and how many children you have. They said that you are a volunteer, and they said about your book. I got the feeling that someone specifically directed them at us — parents, so that we would confirm the information.*

*NG: Mom, they are afraid... they are afraid of teachers... and I am afraid for you. Were they looking for my book?*

*M: They entered the house and left; I hid her. They know everything about you, about your lessons on TV, about volunteer activities... And one said that he would find you.*

*NG: Let them find me, let us talk here in Ukraine.*

*M: Two days later, they came again, and again asked, climbed in the yard, morally oppressed. They came on purpose. They are looking for you.*

*NG: Mom, take care of yourself. My goodness, I never thought that one day I would become a bone in the throat of Russian invaders due to my patriotic position, love for the Motherland, and my native Ukrainian language. And parents will become a living shield for me”.*

The Russian invaders know at what temperature books burn, but they have forgotten the words of their classic: “Manuscripts do not burn” (Bulgakov, *The Master and Margarita*). Overcoming difficulties and challenges depends on perspective and understanding the meaning of one’s work during and after the end of hostilities.

At the time of the survey (July 2022), the university management had taken several important steps to overcome challenges and preserve the university and academic staff. During the spring, it was possible to relocate the university, transfer the site to the cloud, and resume educational and financial activities. Conducting constant monitoring of the needs of employees and students of the university made it possible to develop certain mechanisms: the introduction of psychological support, and humanitarian and financial assistance. Due to the attraction of grant funds, it was possible to purchase laptops for teachers who left their occupations without personal computers. In August 2022, the university’s transition strategy, which is in effect during martial law, was adopted. In turn, university teachers showed true resilience and readiness to overcome challenges. At the beginning of the war, we heard the slogan “Pray for Ukraine”. Today, it has completely changed to “Be brave like Ukraine!”.

The results of our research have shown that for the majority of university scientists, the perspective of scientific research work is clearly defined and accordingly endowed with the meaning of rebuilding one’s own country, regardless of the security situation. It is traced to changing the focus of research that has been initiated.

Ukrainian science, especially during the war, faced the mission of producing new meanings and values as the basis of developing a citizen-patriot with readiness to continue building a sovereign, independent, democratic, legal, and social Ukrainian state, strengthening its national security, and

promoting civil peace and harmony in society despite everything. Therefore, according to the survey results, 17.4% of the respondents have noted that “Military and patriotic issues, national education and self-identity of the Ukrainian people” are current research interests. That is the concept of forming patriotic citizens of Ukraine, prepared for life, with a high national consciousness, capable of building a civil society, which is based on universal human and European values, is recognised as important for modern Ukrainian scientists. This is a deep understanding of the role of the scientific elite in the formation of a free nation that respects freedom of speech and is guided by democratic principles. The one who destroys our books and our scientific elite is guided by other slogans: “War is peace. Freedom is slavery. Ignorance is strength” (Orwell, *Nineteen eighty-four*).

Among other focuses of scientific research, which our faculty members noted, were the following: European integration and international studies; global experience of conflict resolution strategies; a reimagining of the education system; distance education and digitisation of education; the issue of individual psychological safety, the need to preserve adaptive capabilities; renewal and improvement of vital activity under the conditions of radical social transformations; quality of higher education, specialist training capable of working in a case of uncertainty; corporate social responsibility, etc.

The results show that, regardless of challenges, danger, and intimidation, the Ukrainian elite believes in its role in the post-war recovery of Ukraine (Suchikova, 2023). And such endurance and strength of spirit would perhaps be impossible without the support of the scientific community of almost the entire world. Our research and that of colleagues (Lavrysh et al., 2022) show that international support is very important for Ukrainian scientists today. Ukrainian scientists were not alone in such terrible times. And it gives strength to continue scientific research and to start new scientific projects for the revival of Ukraine in the post-war period.

## 6. CONCLUSION

In the research, we demonstrated our own experience of scientific activity in the occupation. The main limitation of our study is the location in time (the results of one survey, conducted in a very short time due to the security aspect, are presented). In addition, the authors of the article are also participants in this process and we were also under occupation for some time. Therefore, the article deviates somewhat from the traditional scientific style, is too emotional, and is reflective. However, perhaps this is the message the world needs right now.

Another limitation is that we present the experience of only one university. There are many universities in Ukraine with similar problems now. Some universities have been relocated due to the temporary occupation of Ukrainian cities by Russia for the second time. But the problem does not only have to do with the discourse of Ukrainian science. It is the problem of all the occupied territories of the world. We talked about the life of Ukrainian scientists in the occupied cities, and about the problems and needs they faced.

The civilised world in the 21st century does not accept such messages. People do not believe that in our time it is possible to enslave large cities. We didn't believe it either. However, it had happened, and now we have been situated at this new reference point of our life — the point of the existence of an entire nation. The point, the countdown of which is marked by the disruption of all processes that have been built up over years and decades. This point is known to show the destruction of the harmonious relationship between the existing sustainable development of society and science.

We are obliged to tell the world about the problems of occupied cities, captured universities, destroyed plans, distorted dreams, and stolen lives. During the occupation, even those who were the voice of the population remained silent. In occupation, thoughts are punished, morally destroyed, and killed. That is why humanity receives so few messages from occupied cities. Our mission to the entire scientific community of the world is to be their voices.

We are obliged to study the reaction to the invasion of Ukraine, and to the temporary occupation of cities, in order to see what problems and challenges are facing each scientist and university. Such an approach gives an opportunity not only to better understand the experience that

Ukrainian scientists currently have in temporary occupation, but also allows us to be more prepared to respond to similar crises in the future.

Despite the extremely difficult situation for Ukrainian scientists, understanding the meaning and value of their scientific achievements for the victory and post-war recovery of Ukraine inspires creation even in moments of hardship. Undoubtedly, this becomes possible due to the support of the scientific community of almost the entire world, mutual support of each other, and effective cooperation, which allows scientists from temporarily occupied cities to organise their scientific and research activities possibly.

This study is an important message to the scientific community of the world because the issue of occupied cities and the life of the civilian population in them has hardly been investigated. In addition, there are almost no studies devoted to figures of science, education, culture, and art who ended up in the occupation. The issue of legal regulation of activities in an occupation, the mental health of those who remain in the occupied cities, and those who were able to leave needs further research. It is also necessary to investigate the issue of the general political system of the world because, in a modern civilised society, there should be no place for slavery and enslavement.

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