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# HOLDING THE SCIENTIFIC FRONT: AN ANALYSIS OF PUBLICATIONS IN SCOPUS OVER THE LAST TWO YEARS ON THE WAR IN UKRAINE

# ТРИМАТИ НАУКОВИЙ ФРОНТ: АНАЛІЗ ПУБЛІКАЦІЙ У SCOPUS ЗА ОСТАННІ ДВА РОКИ ПРО ВІЙНУ В УКРАЇНІ

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The full-scale war in Ukraine, which has been ongoing for almost two years, has not only changed the country's landscape but has also impacted the overall global order, economy, ecology, and industries of many countries worldwide. This war has embodied the horrific reality of armed conflict and emerged as a powerful catalyst for scientific reflection, analysis, and academic dialogue.

Since February 24, 2022, the scientific community has actively collected, analyzed, and interpreted data to understand not only the immediate consequences of the war but also its long-term impacts on the global agenda. An article titled "Russia's brutal attack on Ukraine is wrong and must be stopped" appeared in the journal Nature, where the editorial board clearly outlined its stance: "Nature stands in solidarity with the Ukrainian research community – and continues to support the global exchange of scientific knowledge... The scientific community – including Nature – must and will be a united force against Russia's aggression" [1, p. 201]. Other scientific journal publishers have not remained on the sidelines. Scientific journals and publishers worldwide have expressed their solidarity with the Ukrainian scientific community and condemned military aggression while taking measures to support Ukrainian scientists and facilitate international knowledge exchange during this critical time.

Scientific research emerging in response to the war in Ukraine spans various disciplines, from political science and international relations to economics, ecology, and the humanities. Researchers are analyzing the immediate military and political consequences of the conflict and its longterm impacts on international stability, economic markets, global warming, and migration crises.

Significant attention is also given to the issues of mental health and the social consequences of the war, both for those directly involved in the conflict and for the broader global community. Scientific articles sometimes serve as a source of new knowledge and a platform for expressing support and sympathy for the Ukrainian people.

Moreover, scientific journals and organizations have activated financial and resource support, organizing special grants and programs for Ukrainian scientists affected by the war. Research4Life's decision to include Ukraine in Group A countries was a key initiative in this direction. This step allows Ukrainian researchers to publish their articles in open-access journals without cost.

All of this demonstrates that the scientific community plays a key role in understanding and responding to global crises and shows solidarity and active resistance in response to injustice and aggression. Such a stance is necessary to support global cooperation and peace in our challenging world.

Our work aims to identify and analyze trends in publications about the Ukrainian War in Scopus, focusing on quantitative indicators and the geographical distribution of authors. Our analysis helps us understand how the scientific world is reacting to this war and identifies the key aspects that researchers are focusing on. This, in turn, can influence the formation of international opinion and policies regarding the war and further support for Ukraine.

The data for analysis were collected from the scientometric database Scopus using the keywords "Ukraine" and "War", limited to 2022–2023. During this period, the Scopus database indexed 4,657 articles (as of November 30, 2023), with 1,790 in 2022 and 2,867 in 2023. This indicates that the researchers' interest in the war in Ukraine is not waning, and the figures are dynamic, and changing daily. Table 1 presents the main keywords found in articles about the Russo-Ukrainian War.

Table 1

about the Russo-Okrainian war								
Word	Frequency	Word	Frequency	Word	Frequency			
Ukraine	1 847	Russian	401	War In	134			
		Federation	401	Ukraine	134			
War	1 000	Article	244	Female	133			
Human	652	COVID-19	209	Refugees	130			
Russia	539	Russia-	200	Mental	127			
		Ukraine War	200	Health	127			
Humans	432	Refugee	185	European	114			
				Union	114			

Main keywords most frequently found in articles about the Russo-Ukrainian war

The analysis of the country affiliations of article authors and the languages in which these articles are published unveils a broad canvas of scientific dialogue encompassing the war in Ukraine and its global resonance. Ukraine, the epicenter of the conflict, logically holds a leading position with 1,155 affiliations. This reflects the engagement of local scientists in studying and analyzing events that directly affect their country. The United States, with 670 affiliations, and the United Kingdom, with 445, demonstrate a high level of interest in this topic, possibly due to scientific and geopolitical aspects. Germany and Poland, with 373 and 404 affiliations, respectively, underscore the significance of this topic for Europe, especially considering their geographical proximity to Ukraine and political ties. The substantial contributions of Italy, Spain, and France, with 240, 167, and 122 affiliations, respectively, also reflect a broad European interest in the war in Ukraine. Interestingly, countries like China and India also actively participate in this scientific dialogue, confirming the global dimension of the ongoing war.

Table 2 presents the top authors who reflect on the events and consequences of the war in Ukraine in their publications.

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writing about the war in Ukraine							
Author	Number of articles	Affiliation country					
Undefined	83	-					
Wiwanitkit, V.	16	India					
Chumachenko, D.	14	Ukraine					
Mungmunpuntipantip, R.	12	Thailand					
Keebayoon, A.	12	Cambodia					
Suchikova, Y.	8	Ukraine					
Hyland, P.	8	Ireland					
Ben-Ezra, M.	8	Israel					
Armitage, R.	8	United Kingdom					

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Top authors, according to the Scopus database,

The data analysis on the country affiliations of authors and the number of publications reveals specific trends and challenges in the context of scientific research related to the war in Ukraine. The lack of a predominant presence of Ukrainian scientists among the leaders in the number of publications is particularly telling. Given that Ukraine is the epicenter of the conflict, it was expected that Ukrainian researchers would be at the forefront of studying and interpreting these events.

The presence of only two Ukrainian scientists among the leaders in the number of publications may indicate various limitations the national scientific community faces. These may include limited resources, funding, and access to international platforms for publication. At the same time, researchers from India, Thailand, Cambodia, Ireland, Israel, and the United Kingdom are actively publishing studies on this topic, highlighting international interest and a diversity of perspectives.

In the context of the current situation in the Scopus database, many articles with Russian affiliation can be noted, which continue to be published despite international restrictions and sanctions. The concern arises from the fact that many of these publications may propagate false narratives about Ukraine and its people, portraying Ukrainians in a negative light.

The importance of controlling narratives in the scientific sphere cannot be underestimated, especially in times of war. False information and distortion of facts can have far-reaching consequences, including influencing international opinion and policy.

This situation requires a critical rethinking and activation of efforts by the Ukrainian scientific community. This means actively promoting a positive image of Ukraine as a country of freedom-loving, indomitable people who aspire to European integration and share universal values [2]. Ukrainian researchers can significantly contribute to forming a more balanced and objective picture, using their knowledge and experience for educational and informational work.

The importance of this cannot be underestimated. Scientific dialogue is a vital tool in shaping international thought and policy. Thus, we appeal to scientific institutions, the government, and international partners to support and encourage increased scientific activity among Ukrainian scientists so that they can take responsibility for maintaining the "scientific front" in these challenging times.

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