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From Lockdowns to Publications: The Evolution of COVID-19 Research in the Face of Travel Restrictions

Abstract

Object: This study aims to conduct a bibliometric analysis of the scholarly literature on COVID-19 and travel restrictions, using VOSviewer and Scopus data sets, to understand the evolution, key trends, and impact of this research area since the onset of the pandemic.

Methods: Utilizing a combination of publication-related metrics, citation-related metrics, and citation-and-publication-related metrics, this analysis encompasses 1,484 documents sourced from the Scopus database. The study focuses on the identification of major contributing countries, institutions, and keywords, as well as patterns in co-authorship and citations.

Findings: The research highlights a significant increase in academic output related to COVID-19 and travel restrictions, particularly in 2021 and 2022. The United States, the United Kingdom, and China emerge as leading contributors. Key themes include the efficacy of travel restrictions in managing the pandemic and the socio-economic implications of these measures. Additionally, the study reveals prominent collaboration networks and influential publications in this field.

Conclusions: The bibliometric analysis provides a comprehensive overview of the global research landscape on COVID-19 and travel restrictions. It underscores the critical role of international collaboration and multidisciplinary approaches in addressing the pandemic. Furthermore, the insights gained can inform future research directions and policy decisions in managing global health emergencies.

Keywords: COVID-19, Travel Restrictions, Bibliometric Analysis, VOSviewer, Scopus Database, Academic Output, International Collaboration, Pandemic Management, Socio-Economic Impact, Public Health Policy.

Introduction

December 2019 marks the beginning of COVID-19 and 11th of March 2020 World Health Organization declares it a pandemic (WHO). The severe acute respiratory syndrome coronavirus (SARS-CoV-2) that causes COVID-19 has become a major worldwide health emergency. Researchers and scientists from all around the world have carried out in-depth investigations to learn more about the disease's symptoms, management, and transmission. Around the world, the COVID-19 epidemic has had a huge socioeconomic impact. To stop the virus from spreading, public health measures including lockdowns, travel restrictions, and testing techniques were put in place. The effectiveness of non-pharmaceutical therapies, such as physical separation and stay-at-home orders, was examined in a research that was published in *The Lancet* (Flaxman et al., 2020). Research findings on COVID-19 were widely disseminated thanks in large part to recognized scientific journals. Researchers have made a significant contribution to our understanding of the disease's transmission, clinical presentation, preventative strategies, immunization attempts, long-term impacts, and worldwide impact through in-depth studies and analysis.

Because travel restrictions affected many other aspects, lots of studies have been conducted on this topic. The effect of travel restrictions on the early transmission of COVID-19 was examined in a study that was published in *The Lancet* in June 2020. The results of the study revealed that early application of travel restrictions during the pandemic's initial phase was crucial in preventing the spread of the virus to new places and lowering transmission rates generally (Chinazzi et al., 2020). A different investigation into the efficiency of international travel restrictions in halting the spread of COVID-19 was published in *Nature Communications* in November 2020. According to the study, limiting foreign travel helped to reduce the incidence of COVID-19 importations and the extent of local outbreaks when paired with other public health initiatives including social isolation and testing (Bertuzzo et al., 2020). It is important to remember that travel limitations might not be enough to totally stop the spread of COVID-19. An analysis of the effects of travel re-

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strictions on the COVID-19 worldwide transmission that was published in PLOS Medicine in February 2021 underlined the necessity for further control measures. According to the study, sustained local transmission and community-based interventions were crucial for the long-term management of the virus, even while travel restrictions might postpone epidemics (Haug et al., 2021). The economy and the world's health are also impacted by the enactment of travel restrictions. In September 2020, a piece on the possible effects of travel restrictions on global trade, healthcare access, and social unrest was published in Science. In spite of the fact that travel restrictions could be successful in reducing the spread of COVID-19, the authors stated that they might also have a detrimental influence on the transportation of necessities, upset supply chains, and restrict access to healthcare services, particularly in environments with limited resources (Hsiang et al., 2020).

Technique used in this bibliometric analysis is performance analysis using Publication-related metrics, citation-related metrics and citation-and-publication-related metrics using literature in travel restrictions and COVID-19 with VOSviewer, another technique is an analysis of metrics of Scopus data sets. Main contribution of this paper can be divided into two: 1) In order to understand the main issues in the research discussing main trends including authors, countries, institutions, etc.; 2) Scopus data sets used to highlight the main actors in metrics like number of documents, authors, institutions, etc.

First section is an introduction including information on COVID-19 in pair with travel restrictions. Section 2 is methodology which includes data selection strategy and study approach. Overall bibliometric analysis results are presented in Section 3. Section 5 and 6 shows discussion and conclusion in which highlight main points.

Literature Review

Understanding and evaluating the substantial volume of scholarly literature linked to COVID-19 has benefited greatly from bibliometric analysis. The use of quantitative approaches to assess citation networks, publishing patterns, and research trends has allowed bibliometric analysis to offer insightful information about the state of COVID-19 research worldwide.

The bibliometric study of COVID-19 papers using Scopus and VOSviewer was done by Zyoud & Al-Jabi in the early stages of the outbreak. It draws attention to the total number of publications, the distribution of publication types, the top countries and institutions, and the most popular study areas. This report throws light on the scientific community's attempts to comprehend and treat the condition and provides insightful information about the global COVID-19 research landscape over a given time period (2020).

Researchers can visually examine and study scientific literature using the effective bibliometric analysis tool VOSviewer. In bibliometric studies, including those devoted to COVID-19 research, it is frequently utilized to find co-citation patterns, keywords connections, and collaboration networks.

The visualization of researcher collaboration networks is one of the primary uses of VOSviewer in COVID-19 bibliometric analysis. For instance, Yu et al. used VOSviewer to examine the collaboration trends in COVID-19 research (2020). To extract publication details and co-authorship connections, the authors used Web of Science data. They used VOSviewer to generate a network diagram that showed how field researchers worked together. This analysis contributed to a better understanding of the collaborative environment in COVID-19 research by identifying important research groups and their connections.

Methods

Data collection strategy. According to the World Health Organization, the name of the coronavirus can be divided into its disease name and virus name, which are coronavirus disease (COVID-19) and severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (WHO).

According to Li et al. Scopus has better coverage of the medical publications than the Web of Science, even though Web of Science has a coverage of articles back to 1990 (2010). Another author highlights the tools of Scopus that can make searching for the relevant content easier. Author also says evaluation of journals by Scopus are more accurate statistically.

In the fields of scientometrics and bibliometrics, VOSviewer is a commonly used piece of software that provides sophisticated display and analysis capabilities for bibliographic data. Van Eck and Waltman claim that VOSviewer gives researchers the ability to create and study bibliometric networks, create co-authorship and co-citation maps, and spot research trends and clusters (2009). The tool's capability to manage enormous datasets and provide aesthetically pleasing visualizations that help grasp the intricate connections between scientific papers and authors is emphasized by the authors.

In order to have a full picture four types of names of the virus were used: "coronavirus", "COVID-19", "severe acute respiratory syndrome", "SARS-CoV-2", they were searched in the Scopus database. Filtering

the search from the start of COVID-19 in 2019 results were 535,795 documents. In connection with “travel restrictions” results were lowered to 1,484 documents restricted to only “Articles” as a type of documents to search. All the results were then exported as a CSV document in order to be used in VOSviewer to visualize the data. Other data used in this analysis were Scopus data analytics.

Results

Bibliometric analysis of publication outputs. Starting from 2019 to 2024 overall number of publications on the topic of COVID-19 and travel restrictions were 1,484 documents marking the years of 2021 and 2022 with the most number of publications as 547 and 575. The United States has been the biggest producer of publications having 373 publications, the United Kingdom in second place with 212 publications and China takes third place with 193 publications. Visual presentation of overall countries can be seen in Figure 1. As for the subject area of documents, it is important to mention that one document can have several subject areas. Medicine takes 30,1 % of the overall number, Social Science 13,5% and Environmental Science with 9,3% which with all the other subject areas can be seen in Figure 2.

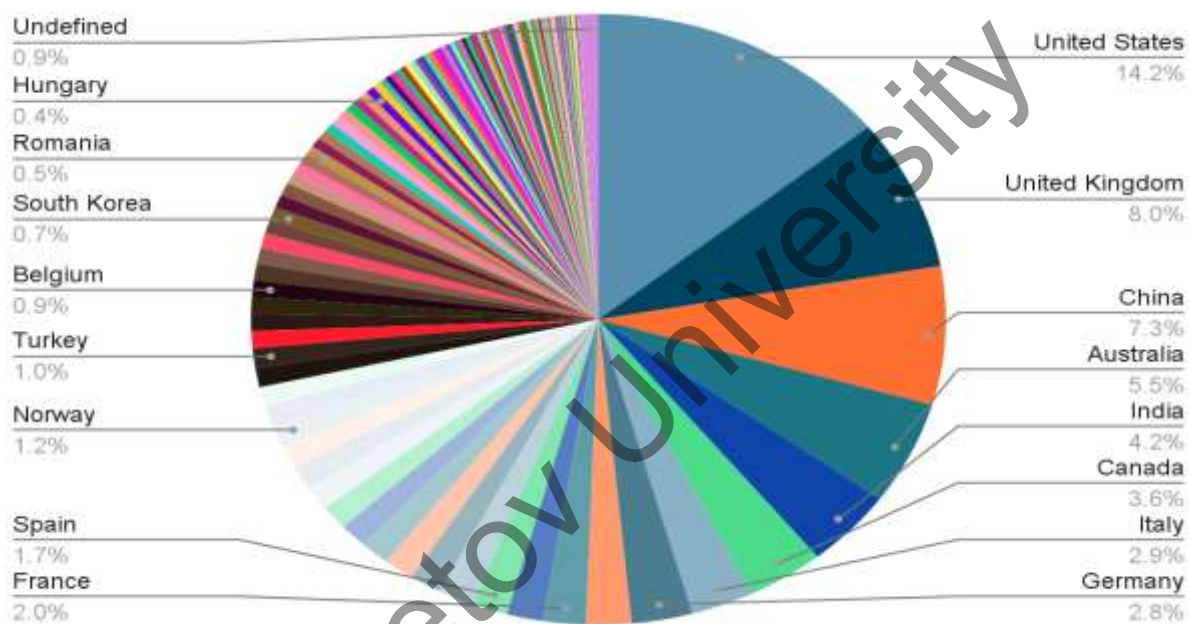


Figure 1. Documents by country or territory.

Note – compiled by authors based on Scopus database

The Figure 1 illustrates the distribution of publications by country or territory related to the research topic of COVID-19 and travel restrictions. The chart details the percentage share of publications from various countries, providing a visual representation of each country's contribution to the research field. The United States leads with the highest percentage of publications, accounting for 14.2% of the total, indicating a significant contribution to the research on COVID-19 and travel restrictions. The United Kingdom follows with an 8.0% share, which suggests it is also a key contributor in this area of study. China is depicted with a 7.3% share, positioning it as another major contributor, reflective of its extensive research efforts in response to the pandemic. Australia (5.5%) and India (4.2%) are shown as other notable contributors, together accounting for nearly a tenth of the research output. Canada, Italy, and Germany are represented with moderate contributions, having 3.6%, 2.9%, and 2.8% shares respectively, demonstrating their active roles in the research community. Contributions from Spain (1.7%) and France (2.0%) are slightly lower, yet still significant within the context of the global research effort. Other countries such as Norway, Turkey, Belgium, South Korea, Romania, and Hungary, each represent smaller fractions ranging from 0.4% to 1.2%, indicating a more distributed and international effort in researching the impacts of travel restrictions due to COVID-19. A small portion (0.9%) is labeled as “Undefined”, which could indicate publications where the country of origin was not specified or was not part of the dataset analyzed. Overall, the chart provides an insightful quantitative analysis of the global research landscape, showcasing the diverse international contributions to

the literature on COVID-19 and travel restrictions. This distribution can be reflective of the countries' research priorities, capabilities, and the impact of COVID-19 within their borders.

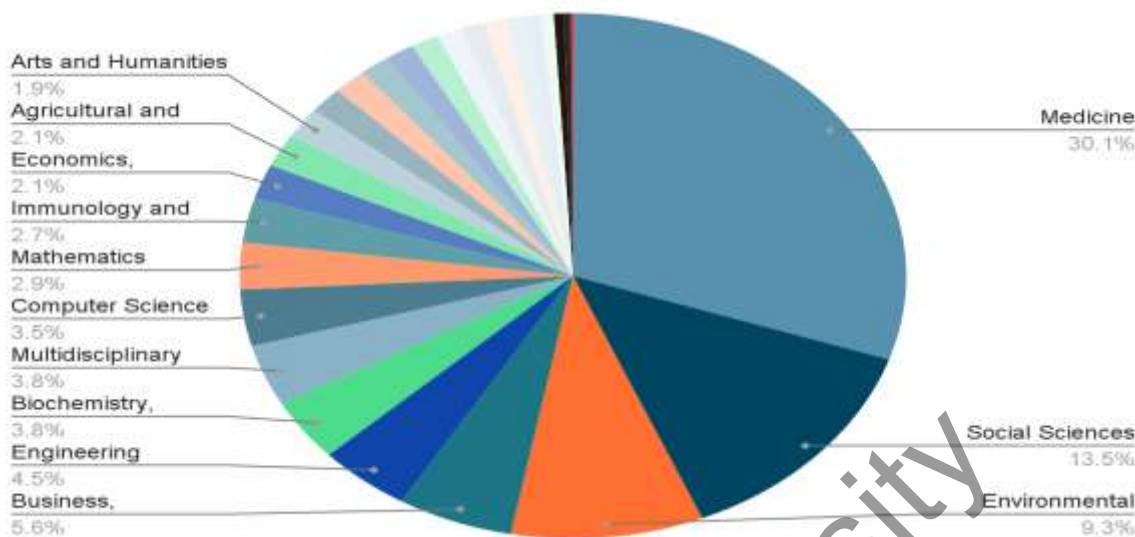


Figure 2. Documents by Subject Area.

Note – compiled by authors based on Scopus database

Figure 2 displays the distribution of scholarly publications on COVID-19 and travel restrictions across different academic disciplines. The largest segment of the chart is occupied by the field of Medicine, which accounts for 30.1% of the publications, underscoring the central role that medical research has played in the global response to the pandemic. The Social Sciences follow with a substantial 13.5% share, reflecting interdisciplinary interest and the socio-economic implications of the pandemic and associated travel restrictions. Environmental Science represents 9.3% of the publications, indicating a significant research interest in the environmental impact and considerations of the pandemic.

Other fields with notable contributions include Business (5.6%) and Engineering (4.5%), highlighting the cross-sectoral effect of COVID-19 and the wide range of strategies explored to mitigate its impact. Additionally, the chart shows meaningful contributions from more specialized fields such as Multidisciplinary (3.8%), Biochemistry (3.8%), Computer Science (3.5%), and Engineering, as well as from the fundamental sciences like Mathematics (2.9%) and Immunology (2.7%). The inclusion of Arts and Humanities (1.9%) and Agricultural Economics (2.1%) reflects the pandemic's broad impact across various facets of human activity. The diverse spread of research interests illustrates the multifaceted challenges posed by COVID-19, requiring a comprehensive and collaborative research approach from various academic fronts.

Bibliometric analysis of the keywords. Keywords with minimum occurrence of 5 times of Scopus database were taken into consideration, out of 9,246 keywords 998 met the threshold. Most appeared keywords are “COVID-19” with 774 total occurrences and total link strength 937. Second word “pandemic” occurred 112 times and total link strength was 221. The third and fourth words being “sars-cov-2” and “coronavirus” with 90 and 67 occurrences with approximately 150 link strength. All of them having the strongest link to each other can be seen in Figure 3, along with visual presentation of the first hundred words can be seen in Figure 4. Also a word cloud was made from the most cited articles author keywords, it is shown in Figure 5.

Figure 4 presents a network visualization generated by VOSviewer, mapping the co-occurrence of keywords in the body of literature on COVID-19. Central to the network is “COVID-19”, depicted as the largest node, indicative of its primary importance within the research. Surrounding it are clusters of interconnected nodes, each representing related key terms and their relative prominence in the discourse. The proximity and lines connecting the nodes suggest thematic and conceptual associations among the terms. Keywords such as “public health”, “pandemic”, and “epidemiology” are prominently connected to “COVID-19”, reflecting their integral role in the understanding and management of the crisis. Other significant terms like “travel restriction”, “quarantine”, and “vaccination” appear in close association, signaling the widespread impact of COVID-19 on various aspects of global health policy and practice.

The visualization also highlights the diverse range of secondary themes that have emerged in response to the pandemic. Keywords such as “mental health”, “telemedicine”, and “education” form distinct clusters, indicating substantial research attention to the broader social and psychological ramifications of the pandemic. The presence of terms like “air quality”, “human mobility”, and “tourism” in conjunction with regional references such as “Africa”, “Europe”, and “Malaysia” illustrates the global scale of COVID-19 research, encompassing environmental concerns, the disruption of normal activities, and the specific challenges faced by different regions. This network visualization underscores the complexity of the pandemic's research landscape, encompassing a wide array of disciplines and perspectives.



Figure 5. Word map from the most cited articles.

Note – compiled by authors based on Scopus database

Dominating the center of the visualization are the terms “COVID-19”, “coronavirus”, “pandemic”, and “SARS-CoV-2”, indicating their centrality to the discourse. Surrounding these core terms are clusters of related keywords that reflect the multifaceted impact of the pandemic. Phrases like “public health”, “lockdown”, “travel restrictions”, and “social distancing” are prominent, suggesting these topics are frequently discussed in conjunction with the pandemic. Similarly, the significant presence of “risk”, “management”, “outbreak”, and “epidemiology” points to a focus on the containment, control, and understanding of the virus's spread.

Moreover, the word cloud reveals the pandemic's intersection with various sectors and aspects of society, with terms such as “supply chain”, “tourism”, “mobility”, and “quarantine” highlighting the economic and social dimensions of the crisis. The appearance of “non-pharmaceutical interventions”, “resilience”, and “crisis policy” underscores the diverse strategies and policies implemented to mitigate the pandemic's effects. The inclusion of specific contexts like “hospital”, “screening”, and “telemedicine” indicates a strong emphasis on healthcare responses. This visual representation effectively encapsulates the broad spectrum of research themes, from individual and community health to global economic and policy challenges posed by the COVID-19 pandemic.

Bibliometric analysis of the citations and publications. First hundred most cited publications' mean count is 218 in range of 41 and 2,152. Years of publishing are between 2020 and 2023, with the first ten most cited articles being published in 2020. First most cited article by Journal of Sustainable Tourism with

2,165 number of citations and tenth by Science of the Total Environment with 430 citations. List of top five journals by the number of citations in an article can be seen in Figure 6. Overall 160 journals published articles on the topic of COVID-19 and travel restrictions and 16 journals have more than 10 articles. List of top five journals by the number of publications can be seen in Figure 7. Journal with the highest number of articles is the International Journal Of Environmental Research And Public Health.

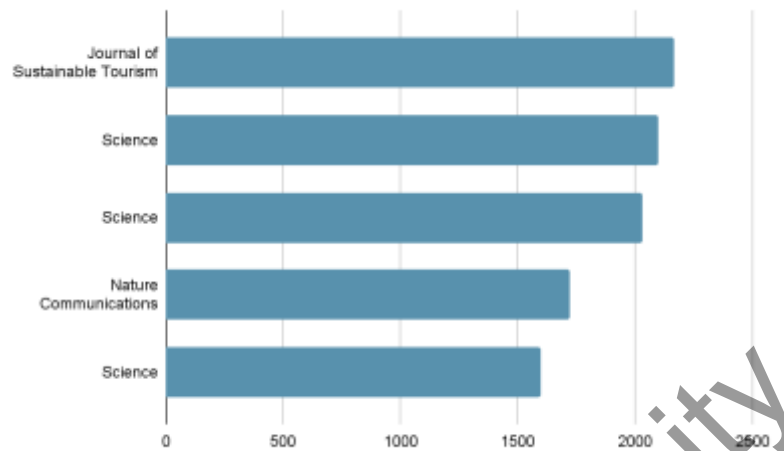


Figure 6. Journals by the number of the top cited articles.

Note – compiled by authors based on Scopus database

The “Journal of Sustainable Tourism” leads with the highest number of citations, surpassing 2000, which reflects its significant impact and the high relevance of its articles in the discourse on sustainable tourism in the era of COVID-19. Following this, three bars labeled “Science” indicate publications from this journal, with citations ranging between approximately 500 to just under 2000. This suggests that “Science” has contributed multiple influential articles to the research landscape on COVID-19, with varying degrees of impact as indicated by the citation counts.

“Nature Communications” is represented by a single bar, showing a citation count that is roughly in the mid-range of those from “Science”. This indicates that articles from “Nature Communications” have also been highly influential in the field, albeit with a lower citation count than the highest from “Science”. The visualization provides a clear comparative perspective on the influence of different scholarly journals in disseminating research related to COVID-19 and travel restrictions, highlighting the dominance of “Journal of Sustainable Tourism” in this research niche and the substantial contributions of “Science” and “Nature Communications” to the academic conversation.

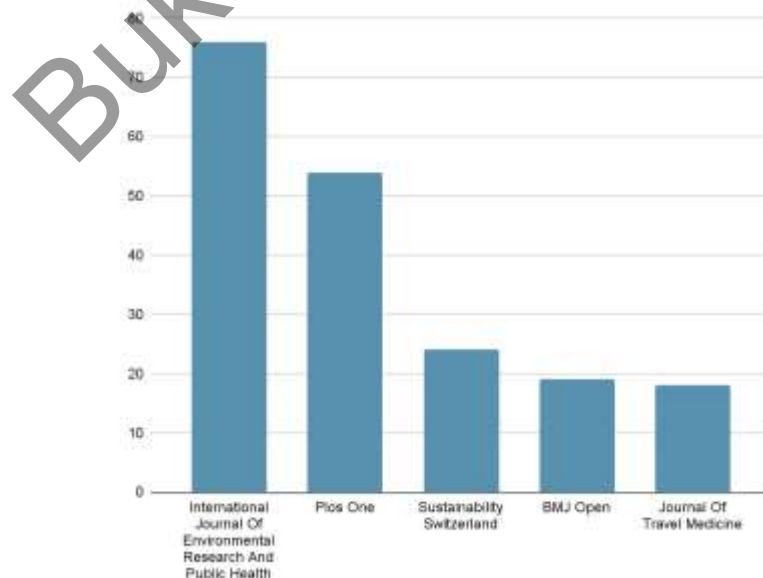


Figure 7. Journals by the number of articles.

Note – compiled by authors based on Scopus database

The “International Journal of Environmental Research and Public Health” leads with the highest number of published articles, over 70, indicating a strong focus on the environmental and public health aspects of the pandemic. “Plos One” follows with just over 50 articles, underscoring its commitment to disseminating a wide range of scientific research relevant to the pandemic, including multidisciplinary approaches.

“Sustainability Switzerland” and the “Journal of Travel Medicine” both show a moderate number of publications, around the mid-20s range, reflecting a targeted interest in the intersection of COVID-19 with sustainability issues and travel medicine, respectively. “BMJ Open” is also represented, with a slightly lower number of publications than “Sustainability Switzerland” and “Journal of Travel Medicine”, suggesting its participation in the scholarly conversation around COVID-19 with an open-access approach. This chart succinctly captures the contributions of these journals to the body of research on COVID-19, highlighting the variations in their focus and the extent of their engagement with this global health crisis.

Bibliometric of co-authorship. Overall number of authors writing on the topic of COVID-19 and travel restrictions are 6,889. Author with the biggest number of articles is British epidemiologist Benjamin John Cowling with 7 articles having link strength of 3 with Research Assistant Professor at The University of Hong Kong Yang Bingyi and an infectious diseases epidemiologist Sheena Sullivan. Wang Yong has the highest number of total link strength 37, while the total link strength of 95 authors is 559. First ten authors by number of publications can be seen in Figure 8 and Figure 9 shows network visualization of co-authorship. Figure 10 highlights the countries links through co-authorship, the minimum number of documents of a country was increased to 15. Out of the 153 countries only 39 meet the thresholds. Main links can be seen by the United States with Australia and the United Kingdom. China as a third country with the highest number of articles has total link strength of 190, while the United States has 391 total link strength.

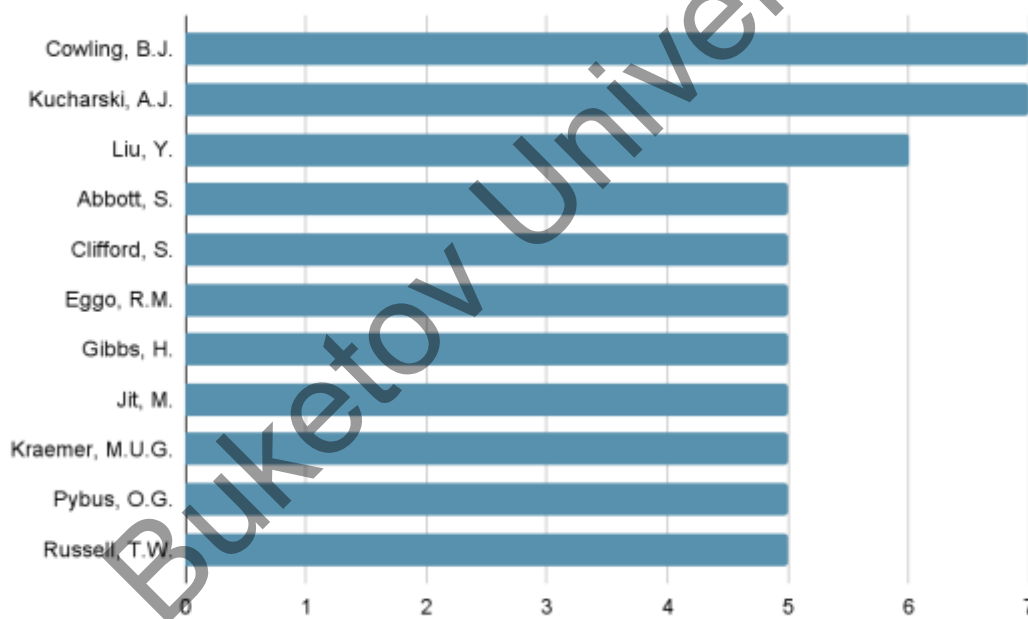


Figure 8. Author by the number of articles.

Note – compiled by authors based on Scopus database

The chart indicates that B.J. Cowling has the highest number of publications, with a total close to seven, suggesting a significant contribution to research in the context of COVID-19. This is followed by A.J. Kucharski and T.W. Russell, each with publications numbering around six, indicating their active engagement in COVID-19 research.

Other researchers such as Y. Liu, S. Abbott, S. Clifford, R.M. Eggo, H. Gibbs, M. Jit, M.U.G. Kraemer, and O.G. Pybus are also represented on the chart with fewer publications ranging from approximately one to five. The distribution of publications among these researchers demonstrates a diverse contribution to the body of knowledge concerning COVID-19, with some researchers showing a more prolific output. The chart effectively highlights the researchers' individual contributions to the scientific community's understanding of COVID-19, reflecting the breadth of the research and the varying degrees of scholarly input from different experts in the field.

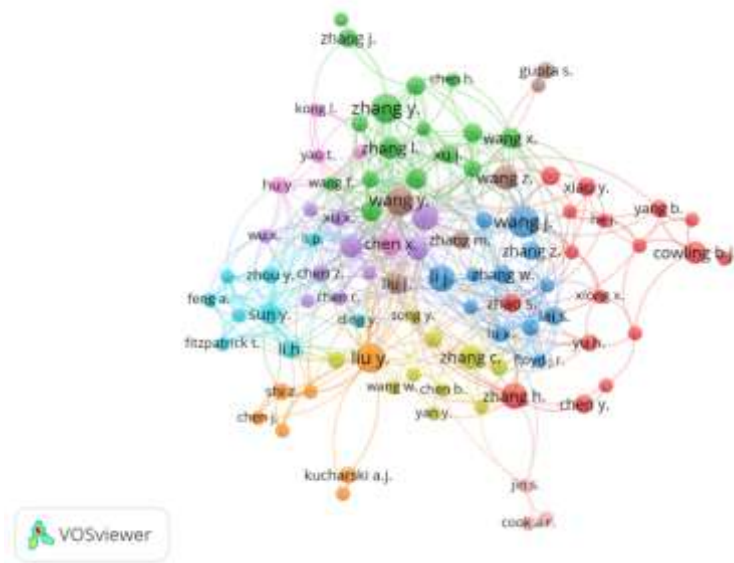


Figure 9. Network visualization of co-authorship.

Note – compiled by authors based on Scopus database

In the visualization, individual researchers are represented as nodes, and the lines between them represent co-authorships, indicating collaboration on published works. The size of the nodes reflects the number of publications or the level of activity of each researcher within this network. Notably, B.J. Cowling and A.J. Kucharski are among the most prominent nodes, signifying their central roles in COVID-19 research collaborations.

The color-coded clusters within the network suggest the existence of various research groups or communities, each likely focusing on different aspects of COVID-19 research. The density of the lines and the proximity of the nodes within these clusters indicate the strength and frequency of collaborations among researchers. This map not only highlights the most prolific individuals in the field but also illustrates the complex web of scholarly interactions that underpin the collective effort to advance the understanding of COVID-19. The visualization serves as a testament to the global and interdisciplinary nature of research in response to the pandemic.

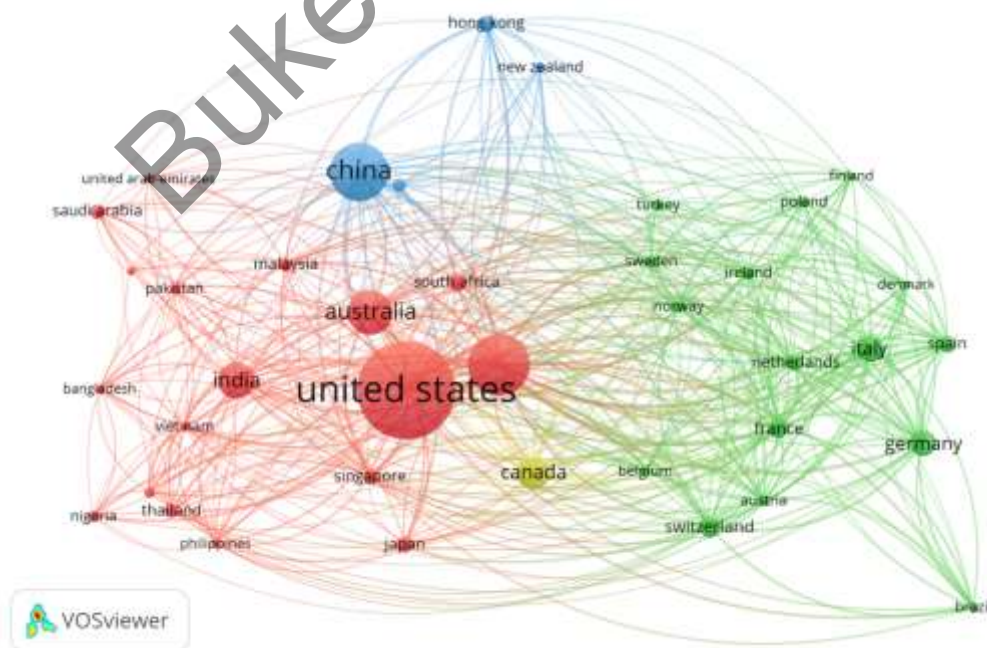


Figure 10. Co-authorship by countries or territories.

Note – compiled by authors based on Scopus database

Nodes represent individual countries, with the size of each node corresponding to the volume of research output or the extent of collaborations that country has engaged in. The United States is shown with the largest node, indicating its prominent role in COVID-19 research and the high degree of international collaboration. China and Australia are also represented with significantly large nodes, suggesting a substantial contribution to the global research efforts on COVID-19.

The lines connecting the nodes illustrate the collaborative links between countries, with the thickness of the lines indicating the strength of collaboration. A dense cluster of connections can be seen among European countries, such as Italy, Spain, Germany, and France, as well as between these countries and the United States, reflecting robust research partnerships. The visualization provides an overview of the global landscape of COVID-19 research, highlighting the interconnected nature of scientific work and the key positions that certain countries hold within this international network. This map underscores the importance of international cooperation in addressing the challenges posed by the pandemic.

Discussions

Globally, many nations have imposed travel restrictions as a result of the COVID-19 epidemic. These limitations were put in place to stop the virus's spread and safeguard public health. Based on the results of this bibliometric analysis an interpretation of different data on the effects of travel limitations in the context of COVID-19 in this discussion section.

The bibliometric analysis showed that since the start of the pandemic, there has been a significant rise in scholarly output relating to COVID-19 and travel restrictions. The number of papers on this subject showed a clear growing trend, underscoring the urgency and significance of comprehending how travel limitations affect containing the virus's spread. 1,484 articles were used in this bibliometric analysis about COVID-19 and travel restrictions from the Scopus database.

Academic world played a significant role in battling COVID-19, like forming evidence-based policy, simulating disease transmission, and assessing the efficacy of preventive measures during the pandemic, as noted by Ferguson et al. (2020). The analysis revealed main actors in this topic, like the United States being a country with the biggest number of articles, followed by the United Kingdom and China.

Main limitation of this bibliometric analysis is excluding all the document types and only using data on articles on the topic.

This bibliometric analysis points out the increased scholarly interest in COVID-19 and travel limitations. Key words, patterns of collaboration, countries and fields were all indicated by the data. This analysis adds to the body of literature by giving a thorough overview of the field of study relating to travel restrictions during the pandemic. In the end, the information gained from such studies can guide though future research on the topic of COVID-19 and travel restrictions.

Conclusions

The understanding of COVID-19 and travel limitations gained by bibliometric analysis supports international efforts to lessen the effects of the pandemic and assure safe and efficient travel in the post-pandemic era. As the World Health Organization declared an end to the pandemic, the topic of COVID-19 is still important. Particularly it is important to analyze such research papers and gather useful information. Overall research on the topic of COVID-19 helps to better understand and predict possible scenarios in the future.

The bibliometric analysis conducted on COVID-19 and travel restrictions provides an empirical foundation for understanding the evolution of the pandemic and the efficacy of various interventions. The substantial increase in scholarly output since December 2019 highlights the academic community's rapid response to the emerging crisis, addressing the disease's transmission dynamics, the impact of non-pharmaceutical interventions, and the broader socioeconomic consequences. The findings from this analysis underscore the pivotal role played by key regions such as the United States, the United Kingdom, and China, not only in terms of publication volume but also in their centrality to global research collaboration networks. The predominance of certain journals and articles within the citation landscape further illustrates the influence of specific research outputs in shaping understanding and policy.

Furthermore, the use of VOSviewer and Scopus data sets has allowed for a nuanced examination of the research ecosystem, identifying main trends and key contributors within the field. The robustness of co-authorship networks revealed through this analysis speaks to the collaborative nature of the scientific endeavor in combating COVID-19. Despite certain limitations, such as the focus on articles to the exclusion of other document types, the bibliometric approach has enriched the discourse surrounding travel restrictions and their implications during the pandemic. The insights garnered provide a valuable resource for policy-

makers, public health officials, and researchers, informing future strategies and studies aimed at managing and mitigating the risks associated with global health emergencies. As the pandemic's status evolves, ongoing analysis of the burgeoning literature will be crucial in navigating the post-pandemic world, ensuring that the global community remains informed and prepared for future challenges.

Complementary Data

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Локдаундардан жарияланымдарға дейін: саяхат шектеулері жағдайында COVID-19 зерттеулерінің эволюциясы

Аңдатпа:

Мақсаты: Зерттеудің мақсаты пандемия басталғалы осы зерттеу саласының эволюциясын, негізгі тенденциялары мен әсерін түсіну үшін VOSviewer және Scopus деректер жинақтарын пайдалана отырып, COVID-19 және шектеулері туралы ғылыми әдебиеттерге библиометриялық талдау жүргізу.

Әдісі: Талдау жарияланымдарға, дәйексөздерге және соған қатысты көрсеткіштер тіркесіміне сүйене отырып, Scopus дерекқорындағы 1484 құжатты қамтиды. Зерттеу қатекші елдерді, институттар мен кілт сөздерді анықтауға, сондай-ақ бірлескен авторлық және дәйексөз үлгілерін талдауға бағытталған.

Қорытынды: Зерттеу COVID-19 және шектеулерге байланысты академиялық белсенділіктің, әсіресе 2021 және 2022 жылдары айтарлықтай өскенін көрсетеді. Басылымдар саны бойынша АҚШ, Ұлыбритания және Қытайды алдыңғы қатардағы елдер деп атап өтуге болады. Негізгі қамтылған тақырыптар жиынтығына пандемиямен күресудегі шектеулердің тиімділігі және осы шаралардың әлеуметтік-экономикалық әсері кіреді. Сонымен қатар, зерттеу халықаралық ынтымақтастық желілері мен осы саладағы басылымдардың маңыздылығын көрсетеді.

Тұжырымдама: Библиометриялық талдау COVID-19 және шектеулер бойынша жаһандық зерттеулерге жан-жақты шолу жасайды. Талдау пандемия мәселелерін шешуде халықаралық ынтымақтастық пен көпсалалы тәсілдердің маңызды рөлін көрсетеді. Сонымен қатар, нәтижелер денсаулық сақтау саласындағы төтенше жағдайларды басқарудағы болашақ зерттеу бағыттары мен саяси шешімдерді қабылдау үшін пайдаланылуы мүмкін.

Кілт сөздер: COVID-19, шектеулер, библиометриялық талдау, VOSviewer, Scopus, ғылыми нәтижелер, Халықаралық ынтымақтастық, пандемияға қарсы күрес, әлеуметтік-экономикалық салдарлар, қоғамдық денсаулық сақтау саясаты.

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**От карантина до публикаций:
эволюция исследований COVID-19 в условиях ограничений на поездки**

Аннотация:

Цель: Цель данного исследования заключается в проведении библиометрического анализа научной литературы о COVID-19 и ограничениях с использованием наборов данных VOSviewer и Scopus для понимания эволюции, ключевых тенденций и влияния этой области исследования с начала пандемии.

Методы: Анализ включает в себя использование комбинации метрик, связанных с публикациями, цитированиями и их сочетанием, и охватывает 1484 документа из базы данных Scopus. Исследование сосредоточено на выявлении ведущих стран, институтов и ключевых слов, а также на анализе шаблонов совместной авторской работы и цитирования.

Результаты: Исследование подчеркивает значительный рост академической активности, связанной с COVID-19 и ограничениями, особенно в 2021 и 2022 годах. Соединенные Штаты, Великобританию и Китай можно выделить как лидирующие страны по числу публикаций. Ключевыми темами являются эффективность ограничений на путешествия в управлении пандемией и социально-экономические последствия этих мер. Кроме того, исследование подчеркивает важность международных сетей сотрудничества и публикаций в этой области.

Выводы: Библиометрический анализ предоставляет всеобъемлющий обзор глобальных исследований по вопросам COVID-19 и ограничений. Анализ подчеркивает критическую роль международного сотрудничества и мультидисциплинарных подходов в решении проблем пандемии. Более того, полученные данные могут быть использованы для определения будущих направлений исследований и принятия политических решений в управлении глобальными чрезвычайными ситуациями в области здравоохранения.

Ключевые слова: COVID-19, ограничения, библиометрический анализ, VOSviewer, Scopus, научные результаты, международное сотрудничество, борьба с пандемией, социально-экономические последствия, политика общественного здравоохранения.