Scholarly Research Output on COVID-2019: The Published Literature Analysis on the ISI Web of Science Databases

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Abstract

The research portrays evaluation of published literature on the topic of COVID-2019 globally. The ISI Web of sciences database was used to access the published literature till December 01, 2020. The types of publications included in the research were, editorials, letters, reviews, articles, case reports, abstracts, and books. The indicators based on the factors; publication period, the most contributing authors, most publishing institutes, countries' contributions, and research journals titles. A total of 82371 documents were retrieved from the database. The USA has produced 16229 documents that are the almost 20% of the total publications. The contribution on research from China is at second position with the numbers of 6994 (8.491%). Italy in research productivity remained third with the number of 5925 (7.193 %). England, India, Canada, Spain Germany, Australia, and France remained in the top ten productive countries in the publication of Covid-2019 respectively. The research publications percentage of these seven countries remained 2.721- 7.005 percent.

Keywords: Coronavirus, research analysis, literature review, web of science, pandemic, COVID-2019

Introduction

The year 2020 means the emergence of coronavirus (COVID-19) in 2019. The virus has spread globally and has paralyzed the living practices of peoples, and the population forced to stay at home. There is nothing more harmful to the health care system than a global pandemic. The World Health Organization (WHO) declared it the first infectious disease on March 11. COVID-19 has recently changed the course of a medical, emergency, and health management ("Coronavirus (COVID-19) events as they happen," n.d.). The COVID-19 pandemic disrupts normal life around the world and affects all sections of society. A pandemic requires immediate action, and reliable comprehensive and medical guidelines are crucial for the generation of new information (Lubbe, Botha, Niela-Vilen, & Reimers, 2020). The influx of research on the COVID-19 pandemic makes it difficult for the scientific community to emphasize the long-term need to make scientific publications more accessible, transparent, and accountable to anyone (Benzell, Collis, & Nicolaides, 2020). The release of these data will allow detailed analysis of the impact of the pandemic to inform the allocation of resources and adopt more targeted methods to mitigate the direct and indirect impact of the COVID-19 pandemic. Hence, the 19-COVID pandemic is to perform clinical trials for a variety of problems. It is our moral responsibility to ensure the safety of the moral judgments is to be issued in the path is steep and is still today. Participants keep a safe investment in the ongoing clinical trials, and they promise to provide answers (Anker et al., 2020). The outbreak of COVID-2019 has affected the physical or mental health of health care workers. Hence, it is important to understand that the pandemic without health care workers COVID-19 cannot be stopped. Therefore, effective protection for healthcare professionals is paramount (Zheng et al., 2020).

Bibliographic research has the potential to pave the way for determining trends in the subject research and development stages (White, Guldiken, Hemphill, He, & Sharifi Khoobdeh, 2016). COVID-2019, a lot of medical misinformation, rumors and Semi-usable filter conspiracy theory Channels, mainly through social networks and other media. This information barrier is very important now Public health issue (Naeem & Bhatti, 2020). In this rapidly changing situation. In this case, millions

of people are blocked and social networks Retail stores, such as Twitter, Facebook, WhatsApp, Instagram and WeChat have become important sources of information crisis information (Brennen, Simon, & Nielsen, 2021). Another research Rey-Martí, Ribeiro-Soriano, & Palacios-Marqués,(2016) Conducted bibliographic analysis of social entrepreneurship in the field of management science and performed statistical analysis of researchers' performance. Their research also includes factors such as annual publication productivity, number of citations, highly cited articles, institutional research productivity, and author productivity. The literature indicates that bibliometric research is a tool to explore the sub-fields, stages of any subject development, historical development, and contributions of researchers in each field of interest. This research will also help you increase your understanding of published literature and improve your research activities (Ahmad, JianMing, & Rafi, 2018). The outbreak of the coronavirus is globally, and it has affected the research and education culture of the world. In this perspective, the evaluation of published literature shows the research indicators. The purpose of this study is to assess which crisis communication experiences and lessons learned can be considered effective based on peer-reviewed studies, and can be used to create a checklist so that evaluators can assess post-pandemic crisis communication efforts (Jong, 2021). Similarly, this research evaluates the productivity of literature published on CPVID-2019 based on the document's types, titles, prolific authors, universities, and the countries' contributions.

Literature Review

In different subjects the evaluate the literature growth many researchers conducted with the help of bibliometric analysis. In this perspective, the current situation of Pandemic COVID-2019 provides a reason to evaluate the productivity of the research on it. With this, Boregowda, at al. (2020) conduct a literature review on the treatment of COVID-2019 and describes the effectiveness of medication with the help of published literature. The most common way among people was across breathing precipitations. The distance to stay away 6 feet at least from anyone who hesitates. Infection reduces the chance of droplet infection. One, COVID transmission has been recorded. Asymptomatic carriers have no symptoms of the disease. The patient should be treated at home, if the symptoms get

worse it will help. With the help of developed software and data systems to fight COVID-19 the different measures and policies applied by governments to control the epidemic and make it known to the public. In this environment, self-isolation becomes a reality (Waris, Atta, Ali, Asmat, & Baset, 2020). Di Nardo et al., (2020) revealed in the research that CoV2 disease infects thousands of people worldwide and is the cause of hundreds of thousands of confirmed deaths, but there is still a lack of data on the epidemiology and clinical characteristics of newborns and children. The purpose of the review is to evaluate the latest literature, including newborns and children, and to provide useful information for clinicians working in this specific population. In humans, the most common route is through breath drops. Stay at least 6 feet away from anyone who hesitates, the decreasing of the disease reduces the risk of infection. One, COVID transmission has been recorded. Asymptomatic carriers are a part of the community he or she has no symptoms of pandemic COVID-2019. The patient should be treated at home, if the symptoms get worse it will help (Haq, Raza, & Malik, 2020). Their research evaluation is based on universities, prolific authors, publications, and job titles. Similarly, research has been conducted to evaluate the literature on climate change (Haunschild et al., 2016). In the field of medical science many research studies are conducted on different terms for the evaluation of the published research globally, geographically in the respective field of interest. In this context, from 1975 to 2012, a quantitative analysis research conducted on the published literature of medical science in Arab countries, and we searched for the term "nutrition and nutrition" to distinguish research contributions from research institutions, authors, and titles (Sweileh, Al-Jabi, Sawalha, & Zyoud, 2014). Lorenc & Robinson, (2013) also researched the analysis of published literature on the alternative Medicine on HIV. The techniques and method of bibliometric analysis also changed with time and technological development. In this perspective, Thelwall, (2008) studied the method of bibliometric analysis method and digital development in this era. The above-described in-depth literature review shows the importance of bibliographic analysis. In this regard, bibliometric published literature analysis has become a powerful research tool in this digital environment.

Research Methodology

The main purpose of the research was to evaluate the literature on COVID-2019 published globally till December 2020. The quantitative method was applied as bibliometric analysis. In this perspective, the data were extracted from the databases of the web of science. To analyze the published literature web of science is known most reliable tool for Scientometrics and bibliometric analysis (Herther, 2009). The web of science database specifies the interdisciplinary, authentic, and scientific research journals more than 13605 tiles globally (Mongeon & Paul-Hus, 2016) .

In this pandemic period COVID-2019 many research publications are being published globally from the last year. So, this research analyzed the document till December 2020 to know the publication impact in one year. This publication described a period total of 84931 documents found on the database of the web of science. By limiting published literature types included; editorials, letters, reviews, articles, case reports, abstracts, and books, 83271 documents data extracted. The refined extracted publications data were saved for further analysis. The research publications were analyzed based on each country's research productivity, research institutes, the most prolific authors, and research journals tiles. Respectively, another study Ahmad et al., (2018) conducted on the same parameters of literature analysis. Figure-I portraits the results of the published literature on COVID-2019.

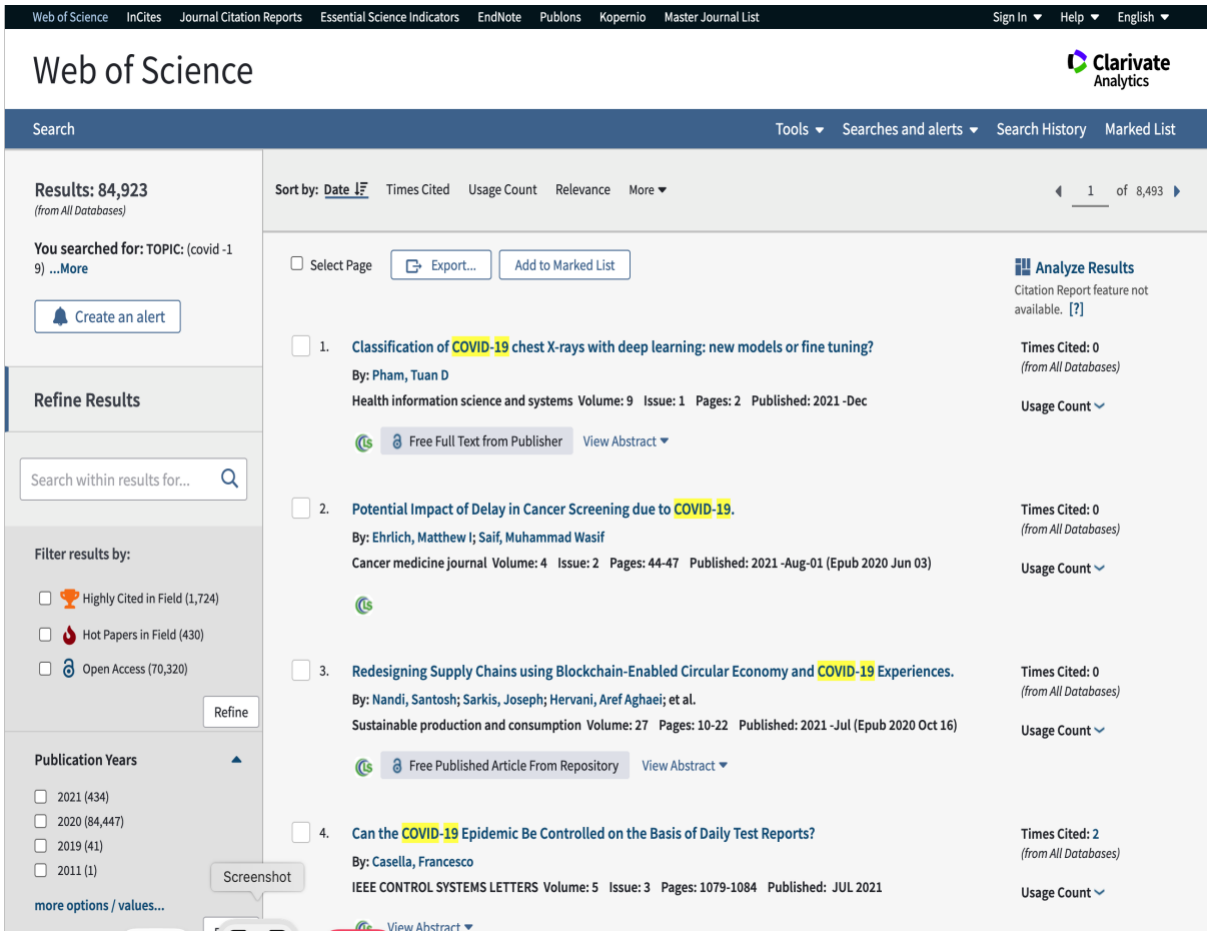

Figure-I

Research Limitations

The research was limited to the documents, editorials, letters, reviews, articles, case reports, abstracts, and books that were indexed on the ISI web of science research database. Figure-II presents the results after limiting the results as per these documents.

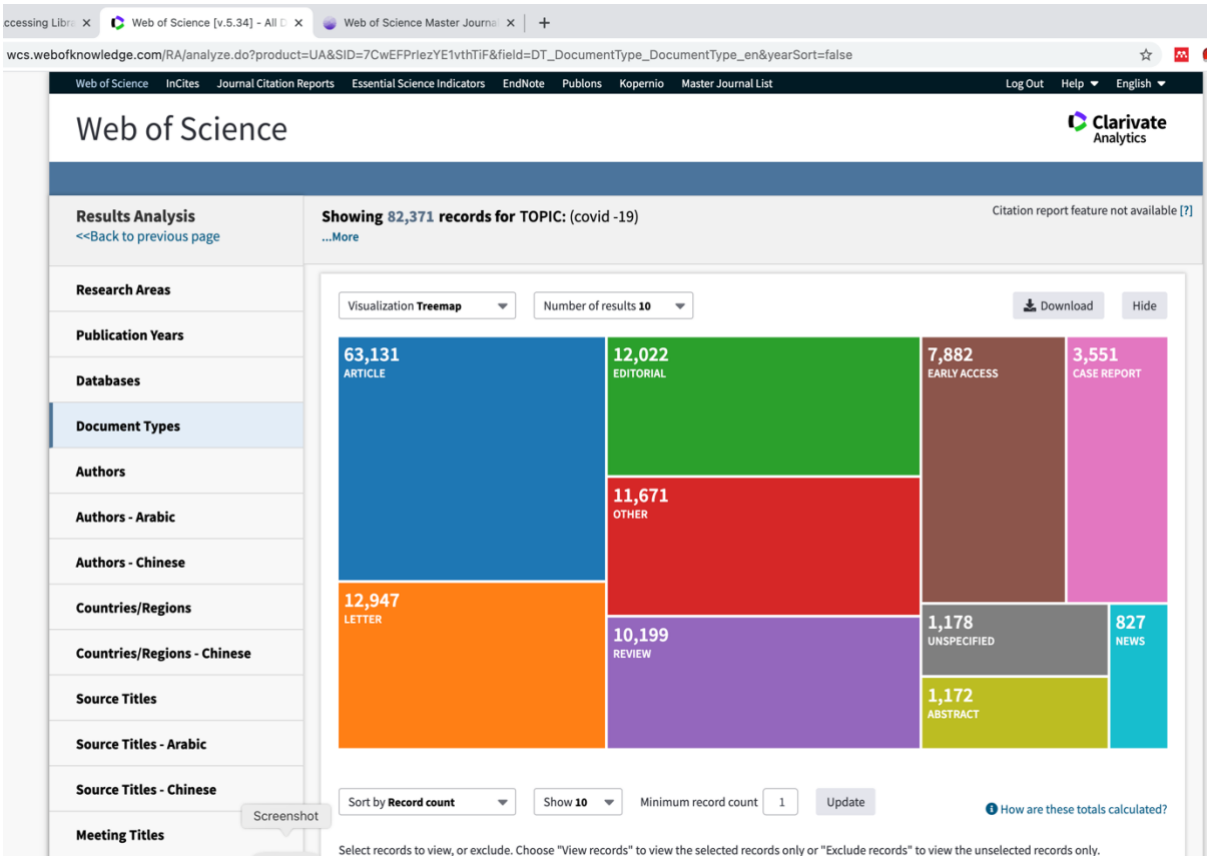

Figure-II

Results

The data on table-I portraits that after limiting the research parameters 82371 documents record data extracted from the databases of the web of science. IN this record the contribution of the USA research at 16229 (19.702%). As the breakout of COVID-2019 emerged in Wuhan, China, it has secured the second position in the contribution of research with the numbers of 6994 (8.491%). Respectively, in the list of most affected counties by COVID-2019, Italy was also the major affected country in the world. The contribution of Italy in most productive countries list remained at third with the numbers of 5925 (7.193 %). England was in the fourth position on the productivity of research in the field of COVID-2019 with the number of documents 5770 (7.005%). The remaining six most productive listed countries in the research of pandemic, India, Canada, Spain, Germany, Australia, and France were able to contribute the research publication from 2.7% to about 4% respectively. Hence, the most productive

listed countries' data show that these countries were most affected during the pandemic COVID-2019, and the contribution of research of these countries made effectively. Although, the contribution of developed countries was more as compared to third world counties.

Table-I Contribution of Literature on COVID-2019 Top listed Countries % of 82371

Rank	Country	Number of Documents
1st	USA	16229 (19.702%)
2nd	Peoples R China	6994 (8.491%)
3rd	Italy	5925 (7.193 %)
4th	England	5770 (7.005%)
5th	India	3327 (4.094%)
6th	Canada	2549 (3.095 %)
7th	Spain	2422 (2.940%)
8th	Germany	2368 (2.875%)
9th	Australia	2361 (2.866%)
10th	France	2241 (2.721%)

(224 Countries/Regions value(s) outside display options.) (26456 records (32.118%) do not contain data in the field being analyzed.)

Table-II revealed that on the topic COVID-19 two research journals, the title BMJ Clinical Research and BMJ British Medical Journal are securing the first two positions with the productivity rate of 1105 (1.341%) and 1069 (1.298%) respectively. Furthermore, on third and fourth position Journal of Medical Virology and International Journal of Environmental Research and Public Health were from 684-618 numbers publication respectively. The remaining listed journal, securing the percentage of the top ten productive journals have the research publications range from 490 to 396. The data shows that all the contributions of research produced by the journals from the field of medical science and disease as compare to the journals of social science where the social solution can be provided with the medical issues.

Table-II Most Productive Research Titles on the Topic of COVID-2109: % of 82371

Rank	Journal Title	Number of Publications & Percentage	
1st	BMJ Clinical Research	1105	(1.341%)
2nd	BMJ British Medical Journal	1069	(1.298%)
3rd	Journal of Medical Virology	684	(0.830%)
4th	International Journal of Environmental Research and Public Health	618	(0.750%)
5th	PLOS one	490	(0.595%)
6th	Clinical Infections Diseases an Official Publication of The Infectious Diseases South America	475	(0.577%)
7th	Cureus	448	(0.544%)
8th	International Journal of Infectious Diseases IJID Official Publication of the International Society for Infectious diseases	423	(0.514%)
9th	Lancet	398	(0.483%)
10th	Lancet London England	396	(0.481%)

(9483 Source Titles value(s) outside display options.) (0 records (0.000%) do not contain data in the field being analyzed.)

The literature-based research is conducted on many areas of interest to know the productivity of research in the different subjects. In this context, the role of academic institutes is vital to promote research activities among society (Islam, Ahmad, Rafi, & JianMing, 2020). Table-III provides the detailed statistics of the highest constructive research institutes in the subject of medical sciences. The research contribution from Harvard university ranked at the top with the publication numbers 1729 (2.099%). In this perspective, the University of London is not for-behind and ranked at second position with the publication numbers 1700 (2.064 %). In the third position University of California System,

1307 and Harvard Medical School 1062 respectively. The fifth position was secured by the Chinese university Huazhong University of Science and Technology with publications 922(1.119%). The remaining top five listed research institutes' publication numbers were from 801 to 700 respectively. The table presents the picture that indicates the efforts of academia and researchers on pandemic research culture to the invention of the vaccine on COVID-2019.

Table-III Top Ten Most Research Productive Academic Institutes: records % of 82371

Rank	Institutes/Universities	Number of Publications & Percentage of 82371	
1st	Harvard University	1729	(2.099%)
2nd	University of London	1700	(2.064 %)
3rd	University of California System	1307	(1.587 %)
4th	Harvard Medical School	1062	(1.289%)
5th	Huazhong University of Science and Technology	922	(1.119%)
6th	Harvard Medical Sch	801	(0.972 %)
7th	University College London	757	(0.919%)
8th	Institut National De La Sante Et De La Recherche Medical Inserm	755	(0.917%)
9th	University of Toronto	738	(0.896 %)
10th	John Hopkins University	700	(0.850 %)

(49449 Institutions value(s) outside display options.) (26096 records (31.681%) do not contain data in the field being analyzed.)

Table-IV is about the list top ten of prolific authors' names in the published literature on COVID-2019. The first ranked publication numbers are anonymous author, that consisted of the editorial materials also with the number of 606 publications. All top listed author names are Chines, some of them are working in universities of USA. As Wang Y from the University of Florida has secured the second rank in publication list with 281(0.341%) numbers of publications. Wang J from Tianjin

Normal University China, and Zhang Y from Xian Jiao Tong University China have secured third and fourth position in the list with the publication numbers 281 (0.341%), 238 (0.289%) respectively. The remaining six names were from four Chinese universities and two of them were USA universities in the list with the publication numbers 244-176 respectively in the field of medical science on COVID-2019. The research contribution of the most prolific author is significant to the research of pandemic COVID-2019.

Table-IV Most Prolific 10 Authors on The Topic COVID-2019: % of 82371

Rank	Author	Published Documents	University	Country
1st	Anonymous	606 (0.736%)	----	---
2nd	Wang Y	281 (0.341%)	University of Florida	USA
3rd	Wang J	239 (0.290%)	Tianjin Normal University	China
4th	Zhang Y	238 (0.289%)	Xian Jiao Tong University	China
5th	Li Y	224 (0.272%)	Texas A& M University System	USA
6th	Liu Y	218 (0.265%)	Sichuan University	China
7th	Liu J	211 (0.256%)	South East University Nanjing	China
8th	Li J	200 (0.243%)	Zhejiang Institute Food and Drug Control	China
9th	Wang L	186 (0.226%)	Tianjin Medical University	China
10th	Zhang L	176 (0.214%)	Metropolitan Institute, Virginia Tech	USA

(99990 Authors value(s) outside display options.). (144 records (0.175%) do not contain data in the field being analyzed.)

Discussion

The evaluation of research as scientific products and the availability of the research data provide the policy outcomes to scholars and other stakeholders encouraged the use of bibliographic methods. However, there are several publications regarding the real needs for literature analysis. This research

was conducted for the publication's evaluation of the pandemic situation research productivity. Conduct quantitative research to discover research trends in specific areas. The results of this survey show the total number of publications about COVID-2019 in the global research production in medical sciences. Considering the massive impact of the medical literature on this epidemic, we also discussed the impact of this research on current epidemics and relevant insights into future outbreaks, epidemics, and other evolving health crises in society. (Boregowda et al., 2020). The research time of this study is limited to the pandemic period through December 1, 2020, of the COVID-19 medical literature, its cross-sectional characteristics and sources, and subjects' longitudinal trends. Analyze the types and skills to reveal the gaps and trajectories of such research in current epidemics and future large-scale public health crises (Liu et al., 2020). As our study data in table-v show that the first ranked records found on the infection disease with numbers 39375 (47.802%). It is almost the half number of records extracted from the data. The respiratory system records also close to infectious diseases with the number of records 37728 (45.803 %). With this, the record on public environmental occupational health secured the third rank on 37371(45.369 %).

Table-V Most Published Records in Research Areas on COVID-2019

Rank	Research Areas	Records	% of 82371
1st	Infectious Diseases	39375	(47.802%)
2nd	Respiratory System	37728	(45.803 %)
3rd	Public Environmental Occupational Health	37371	(45.369 %)
4th	Health Care Science Services	15875	(19.273%)
5th	General Internal Medicine	11477	(13.933%)
6th	Pharmacology Pharmacy	8570	(10.404 %)
7th	Immunology	8551	(10.381%)
8th	Research Experimental Medicine	7779	(9.444%)
9th	Psychology	7018	(8.520 %)
10th	Behavioral Sciences	6648	(8.071 %)

143 Research Areas value(s) outside display options.). (17146 records (20.816%) do not contain data in the field being analyzed.

The remaining six research areas records; general international medicine, pharmacology pharmacy, immunology, research experimental medicine, psychology, and behavioral science records found 11471- 6648 records in the published literature on COVID-2019. Furthermore, the table-v data revealed the priorities of research areas. The most focused areas of the authors were on the diseases and invention of vaccination and the implementation of SOPS in society. Between inflammation and cellular antiviral activity, the host's immune system response to viral infection is essential to inhibit viral replication and spread. However, excessive host cell immune response and virus lysis can cause disease. Studies have shown that people with severe pneumonia, fever, and dry cough are common at the time of diagnosis (Huang et al., 2020). Literature data published from this point of view also explain that the author's social aspect is incomparable to disease prevention. Isolation of infected persons in a social setting is the most important measure to prevent transmission. Immediate actions were taken by the Chinese Ministry of Health, for example, include the isolation and close contact of infected and quarantined suspects (Paraskevis et al., 2020). Our study results are helpful to identify the research areas, contributions of the research institutes, countries, the role of scientists as a researcher. With this, the contribution of research journals titles to deal with this pandemic COVID-2019 situation in the society.

Conclusion

The research result portrait that pandemic COVID-19 pandemic found a public health issue globally. Our understanding of pathogens and how they infect cells and because the disease is evolving rapidly. The results of the study explained the contribution in the research of the USA, PR. China and Italy's contributions are impressive as compared to other countries of the world. The rapid response from all the countries around the world expanding their national response, including increasingly interested in disease monitoring systems, expanding their response and responding in their communities. Our study has included all the published literature databases that were indexed in the ISI web of science.

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