Analysis of Publication Productivity of 'Corona Virus' By Scopus Database during 2010 to 2019

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Abstract

Coronavirus disease (COVID-19) is an infective disease caused by a new virus.Scopus is a leading research platform, helping to find, analyze, and share data in the sciences, social sciences fields. Thus, the present study reflects the "Corona" as replicated in Scopus during the period from 2010-2019. The present study examines the highly productive a authors, Country wise, Document Type wise, publication year wise, Language wise, Journal wise or source wise etc.

Keywords

Publication productivity:; corona virus; Scopus Output; Document; 2010 to 2019

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Introduction

The disease causes respiratory illness (like the flu) with symptoms such as a cough, fever, and in more severe cases, difficulty breathing. You can protect yourself by washing your hands frequently, avoiding touching your face, and avoiding close contact (1 meter or 3 feet) with people who are unwell. With the altering scenario of library resources means the resource sharing has been changed. E resources playing a vibrant role in e-resource sharing E-journal is one of the utmost important kind of e-resource.

Scopus

Scopus is Elsevier's abstract and citation database launched in 2004. Scopus covers nearly 36,377 titles (22,794 active titles and 13,583 inactive titles) from approximately 11,678 publishers, of which 34,346 are peer-reviewed journals in top-level subject fields: life sciences, social sciences, physical sciences and health sciences. It covers three types of sources: book series, journals, and trade journals.

Objectives of the Study

The core objective of the existing study is to recognize the analysis of publication on corona as reflected in Scopus.

- Year wise documents publication
- Highly productive authors
- Country wise publication of documents
- Document type wise publication
- Language wise publication
- Subject wise document publication
- Highly preferred journals by scientists/authors
- Highly Productive Institutions by publications

Scope and limitation of the study

The scope of the study is limited to search result on the title of "corona" in Scopus during 2010 to 2019.

Methods

Progress of publications in the 'Corona' has been derived from the Scopus database published by Elsevier from 2010 -2019 during this period, 21558 documents found for the Title 'Corona'.

Policy used for Corona documents in Scopus database is mentioned below.

TITLE-ABS-KEY (corona) AND (LIMIT-TO (PUBYEAR , 2019) OR LIMIT-TO (PUBYEAR , 2018) OR LIMIT-TO (PUBYEAR , 2017) OR LIMIT-TO (PUBYEAR , 2016) OR LIMIT-TO (PUBYEAR , 2015) OR LIMIT-TO (PUBYEAR , 2014) OR LIMIT-TO (PUBYEAR , 2013) OR LIMIT-TO (PUBYEAR , 2012) OR LIMIT-TO (PUBYEAR , 2011) OR LIMIT-TO (PUBYEAR , 2010))

Review of Literature

Baskaran C. and Sivakami N. (2014) Quantitative analysis is passed out to identify the literature growth, authorship pattern, collaboration and journal distribution on Swine influenza disease research based on data obtained from Pubmed databases for aera from 2006–2010. A total of 2360 articles were downloaded from Pubmed database using the search term "Swine*" subjected to bibliometric data analysis techniques. KhisteGajanan P.& Surwade Yogesh P. (2018) explained the "Web 3.0" as reflected in Science Direct for the period from 2008-2017. Present paper describes the Document Type, Documents Published by Year wise, highly preferred publications for publishing documents.Veer D.K., Kadam,Santosh& Kale, R.D. (2009) explain considering the increasing significance of e-consortia in the digital era. Present paper highlights on the meaning & objectives of consortium with its benefits. The paper also points out the growth of consortium in India. Veer D. K. &KhisteGajanan P. (2017) argues the "Digital Library" as replicated in Scopus for the period from 1995– 2016. The present paper examines the highly productive authors, document Types, Present study is also aims to find out the top contributing Indian institutions, most prolific authors, the preferred sources for publications by Geographical distribution by country, Subject area, Source Type, Affiliation, and Language etc. The result indicates that there were total 18854 documents on digital library during 1995 to 2016. The main institutes contributing on Digital Library are Virginia Polytechnic Institute and State University. Fox, E.A. is the most productive author in terms of publications. At the international front, India"s contribution to Digital Library is 578 documents during 1995 to 2016 which is rank on Seventh.

Analysis

Year wise document:

Theauthor has analyzed the data related to related to 'Corona' based literature chronologically during 2010 to 2019 and presented in table no.1

Table 1: Year wise documents published on 'Corona'

Sr. No.	Year	Documents	Percentage
1	2019	2359	10.94
2	2018	2363	10.96
3	2017	2402	11.14
4	2016	2302	10.68
5	2015	2164	10.04
6	2014	2190	10.16
7	2013	2107	9.77
8	2012	1928	8.94
9	2011	1944	9.02
10	2010	1799	8.34
	Total	21558	100.00

Table no.1 reveals that, year wise distribution of documents. The maximum number of documents was published in the year 2017 i.e.2402(11.14%) followed by 2363 (10.96%) documents published in the year 2018 and lowest number of article 1799 i.e.(8.34%) documents published in the year 2010.

Productive authors

The author has analysed the data related to productive authors and presented in the Table no. 2.

Table 2: Authors who wrote highest documents on the topic Corona

Sr. No.	Authors	Documents	Rank
1	Lu, T.	92	1
2	Nakariakov, V.M.	88	2
3	Dascalescu, L.	84	3
4	Fineschi, S.	81	4
5	Vourlidas, A.	74	5

Table 2 shows that highly published top five productive authors. It is observed that **Lu, T.** ranks first who has contributed maximum number of 92 documents and **Vourlidas, A.** who has contributed 74 documents on the topic corona in 5th rank.

Country wise distribution

The data has been analyzed related to 'Corona' by top ten countries and presented it in the table 3.

Table .3: Country wise analysis

Sr. No.	Country	Documents
1	United States	5600
2	China	4740
3	United Kingdom	2158
4	Germany	1858
5	France	1349
6	Russian Federation	1298
7	Italy	1229
8	Japan	1201
9	India	1111
10	Spain	792

Table 3 shows that, the geographical distribution of documents by country wise. United States tops the list with 5600 documents, followed by China with 4700 documents to its credit & Spain has contributed 792 documents to its credit

Document types

Table 4: Document types and number of documents Published on Corona

Sr. No.	Document type	Document	Percentage
1	Article	17011	78.91
2	Conference Paper	3232	14.99
3	Review	646	3.00
4	Book Chapter	306	1.42
5	Conference Review	92	0.43
6	Letter	77	0.36
7	Note	47	0.22
8	Erratum	43	0.20
9	Short Survey	37	0.17
10	Editorial	30	0.14
11	Book	21	0.10
12	Retracted	2	0.01
13	Undefined	14	0.06
	Total	**21558**	**100**

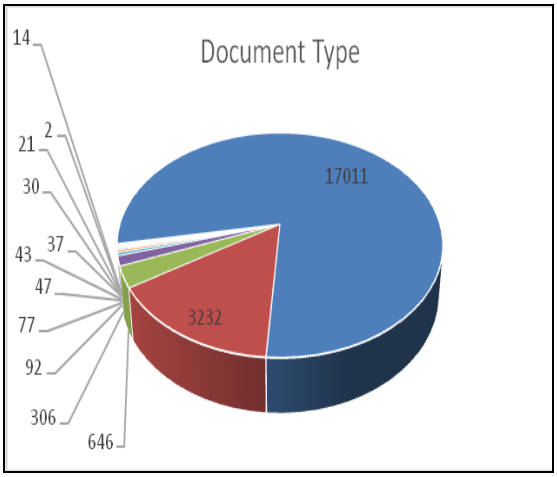


Table No.4 & Figure no.1 shows that the maximum number of documents published under the category of article is 17011 (78.91%), whereas 3232 (14.99%) under the category Conference Paper. A small number of contributions are categorized under Book is 21 (0.10%). Whereas 14i.e. (0.06%) document is undefined its publication & 2 i.e. (0.01%) document is retracted.

Language wise Distribution:

There are different languages in the world, the data has been analyzed by languages to know whichhas a highest documents contributed in Scopus on Corona is shown in Table no.5

Table 5: Language wise documents Published on Corona

Sr. No	Language	Documents	Percentage
1	English	20052	93.01
2	Chinese	1013	4.70
3	Spanish	128	0.59
4	Japanese	73	0.34
5	Polish	42	0.19
6	Russian	42	0.19
7	Korean	33	0.15
8	German	29	0.13
9	Italian	28	0.13
10	French	20	0.09
11	Portuguese	19	0.09
12	Persian	11	0.05
13	Turkish	8	0.04

14	Ukrainian	7	0.03
15	Czech	5	0.02
16	Catalan	5	0.02
17	Hungarian	3	0.01
18	Latvian	2	0.01
19	Romanian	2	0.01
20	Slovak	2	0.01
21	Bulgarian	1	0.00
22	Croatian	1	0.00
23	Dutch	1	0.00
24	Greek	1	0.00
25	Lithuanian	1	0.00
26	Slovenian	1	0.00
27	Swedish	1	0.00
28	Undefined	27	0.13
	Total	21558	100

Table 5 indicates that English is the most predominantlanguage usedfor publication of 20052 (93.01%) documents on Corona followed by in Chinese in 1013 (4.70%) documents and very less 1 i.e.(0.00%) in Swedish language and 27 i.e.(0.13%) documents undefined their language.

Subject wise Analysis:

The author has analyzed the subject wise analysis of compileddata & shownin Table no. 6

Table 4: Subject wise documents Published on Corona

Sr.No.	Area	Documents
1	Physics and Astronomy	9736
2	Earth and Planetary Sciences	6344
3	Engineering	5587
4	Materials Science	4192
5	Chemistry	3043
6	Medicine	1901
7	Chemical Engineering	1716
8	Biochemistry, Genetics and Molecular Biology	1635
9	Energy	1448
10	Mathematics	1114
11	Environmental Science	969
12	Computer Science	924
13	Agricultural and Biological Sciences	750
14	Neuroscience	626
15	Pharmacology, Toxicology and Pharmaceutics	534
16	Multidisciplinary	312
17	Social Sciences	230
18	Nursing	199
19	Arts and Humanities	187
20	Immunology and Microbiology	142
21	Psychology	96
22	Health Professions	79
23	Veterinary	68
24	Business, Management and Accounting	66
25	Decision Sciences	43
26	Economics, Econometrics and Finance	26
27	Dentistry	13
28	Undefined	1
	Total	**41981**

Table No. 6 shows the Subject-wise analysis indicates that maximum number of contributions was in the area of Physics and Astronomy i.e. 9736 & lowest contribution published in Dentistry is 13 whereas 1 paper is unidentified to its subject.

Sources of Ranking

The sources are nothing but the documents in the highest number of documents has been published on the term "Corona". The related information is being presented in the Table 7.

Table 7: Highest ranking sources in which highest number of documents published on Corona

Sr. No.	SOURCE TITLE	Documents	Rank
1	Astrophysical Journal	2085	1
2	Astronomy And Astrophysics	874	2
3	Solar Physics	571	3
4	Astrophysical Journal Letters	399	4
5	Monthly Notices Of The Royal Astronomical Society	392	5
6	GaodianyaJishu High Voltage Engineering	306	6
7	IEEE Transactions On Dielectrics And Electrical Insulation	270	7
8	Journal Of Physics Conference	249	8

	Series		
9	Proceedings Of SPIE The International Society For Optical Engineering	227	9
10	Journal Of Electrostatics	208	10

As per Table No.7 Astrophysical journal ranks first with 2085 documents to its credit, followed by Astronomy and Astrophysics ranking on second with 874 documents & Journal of Electrostatics is on Tenth rank with 208 documents.

Collaborative Platform:

Author wants to recognize how many documents published on the title "Corona" and their affiliating institutions. The data has been analysed and presented in the Table 8.

Table . 8: Top ten Affiliation contributions on the Corona

Sr. No.	Affiliation	Documents
1	Chinese Academy of Sciences	971
2	NASA Goddard Space Flight Center	576
3	CNRS Centre National de la RechercheScientifique	575
4	Russian Academy of Sciences	533
5	Ministry of Education China	455
6	Harvard-Smithsonian Center for Astrophysics	377
7	University of Chinese Academy of Sciences	313
8	National Astronomical Observatories Chinese Academy of Sciences	311
9	Max Planck Institute for Solar System Research	296
10	Naval Research Laboratory	296

Chinese Academy of Science contributed 971 documents which is the highest Naval Research Laboratory has contributed 296 documents to its credit.

Findings:

Total number i.e. 21558 documents are available on the title of 'Corona' in scopus database during 2010 – 2019.

The highest number of documents was published in the year 2017 & lowest number of documents published in the year 2010.

In productive authors, Lu,T. has contributed 92 documents in rank 1st position whereas Vourlidas, A. who has contributed 74 documents on the topic corona in 5th rank.

United States tops the list with 5600 documents & Spain has contributed 792 documents during 2010-2019 which is on tenth rank.

Extreme number of documents published under the category of article i.e. 17011 (78.91%) & lesser number of contributions are categorized under Book i.e. 21 (0.10%).

English is the most predominant language for publication i.e. 20052 (93.01%) documents on Corona

Maximum number of contributions was in the area of Physics and Astronomy i.e. 9736 & lowest contribution published in Dentistry is 13.

Astrophysical journal ranks first with 2085 documents to its credit & Journal of Electrostatics on Tenth rank with 208 documents.

Chinese Academy of Sciences has contributed 971 documents whereas Max Plank institute for Solar system research and Naval Research Laboratory has contributed very less i.e. 296 documents.

Conclusion

The data suggest that there was a significant research activity in the word Corona during the study period. The present study indicates that there is an increase in the documents year by year. For the current situation of corona in the world the study is very useful.

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