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DO THE GLOBAL SCHOLARLY PUBLICATIONS ON BRONCHITIS RELY ON COLLABORATIVE RESEARCH? : AN EVALUATIVE STUDY

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Abstract

The paper represents the Authorship Pattern in the field of Bronchitis research dependent on the productions indexed in the Web of Science during the period from 2014 to 2018. By and large all out 21147 records were accessed. Bibexcel and MS-Excel were utilized to break down the records. Pajek was used to make the mapping. It is discovered that the Degree of Collaboration shows a growth with fluctuation. The collaborative index for widespread degree of 28.81 shows a supportive tool towards synergistic research design than single research in Bronchitis look into. The author Chang AB has recorded 115 papers. The authorship pattern demonstrates that, out of all out 21147 researchers, 95.46% of the production distributed under the multiple authors.

Keywords: Authorship pattern, Scientometrics, Web of Science, Collaboration

Introduction

Bronchitis maladies are incessant sicknesses of the airways and different parts of the lung. Bronchial asthma and constant obstructive aspiratory ailment are the most well-known kinds of incessant respiratory illnesses ⁽¹⁾. The worldwide weight of asthma and COPD is expanding and it is assessed that in excess of 500 million individuals experience the ill effects of bronchial asthma and COPD ⁽²⁾.

The discipline concerning authorship pattern or productivity is one regarding the important components in the scientometric analysis. This instruction was once aimed according to observe the authorship pattern yet collaborative research of the discipline on Bronchitis. Generally, such is imperative in accordance with concentrate on authorship pattern in conformity with assess the research contributions in a field and bronchitis research is not an exception.

Henceforth the study of research in field of Bronchitis and its logical yield, its analysing and mapping will help the data researchers just as academic network.

Review of literature

Amsaveni et al (2013) ⁽³⁾ examined the authorship collaboration in entire branches of science and technology for the present century. The concluded indicates to that couple authors collaboration contributed more than single authorship research articles.

Biradar and Tadasad (2016) ⁽⁴⁾ studied the trend in the pattern of authorship and research collaborative in the subject of economics. The study found that joint authors are more than Single authors. Its revealed ranking authors and many factors also used in this study.

Baskaran.C and Sadik Batcha.M (2012) ⁽⁵⁾ measured the degree of collaboration score of mean is 0.70 and in the year 1991 highest score is 0.88. Amsaveni.N and Sadik Batch.M (2019) ⁽⁶⁾ analysed the authorship pattern and Lotka's Law applicability in the number of distributions by all authors. This study concluded that Lotka's law fit for this research. Hydar Ali and Adithya Kumari.H (2018) ⁽⁷⁾ revealed that the single author papers have decreasing trend and multiple authors have an increasing trend in research activities.

Sadik Batcha.M, Roselin Jahina.S and Muneer Ahmad (2018) ⁽⁸⁾ examined that authorship pattern and author productivity of DESIDOC journal of Library and Information Technology. And also analysed various factors of Scientmetric indicators.

Objectives of the Study

The present study aims at working out the following objectives;

- To examine the authorship pattern in the Bronchitis research.
- To study the Single Vs Multiple author publications
- To identify the Author productivity
- To identify the degree of collaboration and determine the Collaborative Index.
- To identify the top prolific authors in the field of Bronchitis disease.

Methodology

Web of science is citation database developed by Thomson Reuters. It is a commercial database which covers the largest abstract and citation database, in which peer-reviewed journals in their subjects like Social Science, Arts, and Humanities. A total of 21147 records have been found and same has been exported in the excel format and Bibexcel tool for further analysis. The degree of collaboration is determined according to the formula given by Subramanyam ⁽⁹⁾. The Pajek helpful to mapping the co-authors and country collaboration.

Analysis and Interpretation

Table -1: Year wise Authorship Pattern of Bronchitis Publications

Authors	2014	2015	2016	2017	2018	Total
Single Author	161 (4.50%)	209 (4.82%)	229 (4.98%)	206 (4.44%)	156 (3.90%)	961 (4.54%)

Two Authors	343 (9.58%)	425 (9.81%)	429 (9.34%)	461 (9.94%)	374 (9.35%)	2032 (9.61%)
Three Authors	395 (11.03%)	537 (12.39%)	565 (12.30%)	538 (11.60%)	478 (11.95%)	2513 (11.88%)
Four Authors	448 (12.51%)	557 (12.85%)	537 (11.69%)	567 (12.22%)	472 (11.80%)	2581 (12.21%)
Five Authors	455 (12.71%)	531 (12.25%)	541 (11.78 %)	536 (11.55%)	473 (11.83%)	2536 (11.99%)
Six Authors	395 (11.03%)	451 (10.41%)	515 (11.21%)	497 (10.71%)	424 (10.60%)	2282 (10.79%)
Seven Authors	346 (9.66%)	366 (8.45%)	393 (8.55%)	425 (9.16%)	364 (9.10%)	1894 (8.96%)
Eight Authors	255 (7.12%)	307 (7.09%)	335 (7.29%)	358 (7.72%)	278 (6.95%)	1533 (7.25%)
Nine Authors	175 (4.89%)	210 (4.85%)	251 (5.46%)	254 (5.48%)	225 (5.63%)	1115 (5.27%)
Ten Authors	155 (4.33%)	187 (4.32%)	192 (4.18%)	180 (3.88%)	195 (4.88%)	909 (4.30%)
Above 10	453 (12.65%)	553 (12.76%)	607 (13.21%)	617 (13.30%)	561 (14.03%)	2791 (13.20%)
Total	3581	4333	4594	4639	4000	21147
%	16.93	20.49	21.72	21.94	18.92	100

Table 1 shows that the authorship pattern of 21147 publications over the study period. The year wise analysis shows that the performance of the above 10 author paper rank first in order with 2791. The performance of Four authored papers is better in almost all the years. The Five authored paper follows the third in order with 2536 (11.99%) of the total contributions. The least author performance for ten author collaborations 909 (4.30%).

Table – 2: Analysis of Single Vs Multiple Authors

Year	Single Author	Multiple Authors	Total
2014	161	3420	3581
2015	209	4124	4333
2016	229	4365	4594
2017	206	4433	4639
2018	156	3844	4000
Total	961 (4.54%)	20186 (95.46%)	21147

This table shows Single Vs Multiple Authors analysis. Its proved forms the analysis that single author papers 961 (4.54%) have decreasing trend and there by Multi contributions 20186 (95.46%) have an increasing performance in research activities.

Table – 3: Ranking of the Most Prolific Authors

S.No	Authors	Records	Percentage (n=241670)
1	Chang AB	115	0.048
2	Korppi M	98	0.041
3	Vos R	91	0.038
4	Needham DM	88	0.036
5	Wang Y	86	0.036
6	Zhang Y	86	0.036
7	Verleden GM	85	0.035
8	Camargo CA	84	0.035
9	Gern JE	72	0.030
10	Williams JV	71	0.029
11	Palmer SM	71	0.029
12	Vanaudenaerde BM	71	0.029
13	Lee JH	69	0.029
14	Keshavjee S	69	0.029
15	Verleden SE	67	0.028
16	Lee J	67	0.028
17	Welte T	66	0.027
18	Li Y	65	0.027
19	Wang J	64	0.026
20	Zhang J	63	0.026

Table 3 shows the top most prolific contributor in the field of Bronchitis research. Among the authors Chang AB gets the first rank with 115 (0.048%) Publications. The second rank for Korppi M with 98(0.041%). The third rank Vos R with 91 (0.038%). The Fourth rank for Needham DM with 88 (0.036%), followed by fifth rank, Wang Y with 86 (0.036%) and the other ranks have been given in the table 3.

Table- 5: Analysis of Collaboration factors of Bronchitis Research

Year	Publication	Authors	CI	CC	MCC	DC
2014	3581	20586	5.749	4.74867	5.750279	0.96
2015	4333	24567	5.67	4.66974	5.671053	0.95
2016	4594	26405	5.748	4.74771	5.748966	0.95
2017	4639	26767	5.77	4.76999	5.771238	0.96
2018	4000	23492	5.873	4.873	5.874469	0.96
Total	21147	121817	28.809	4.76049	5.760759	0.95

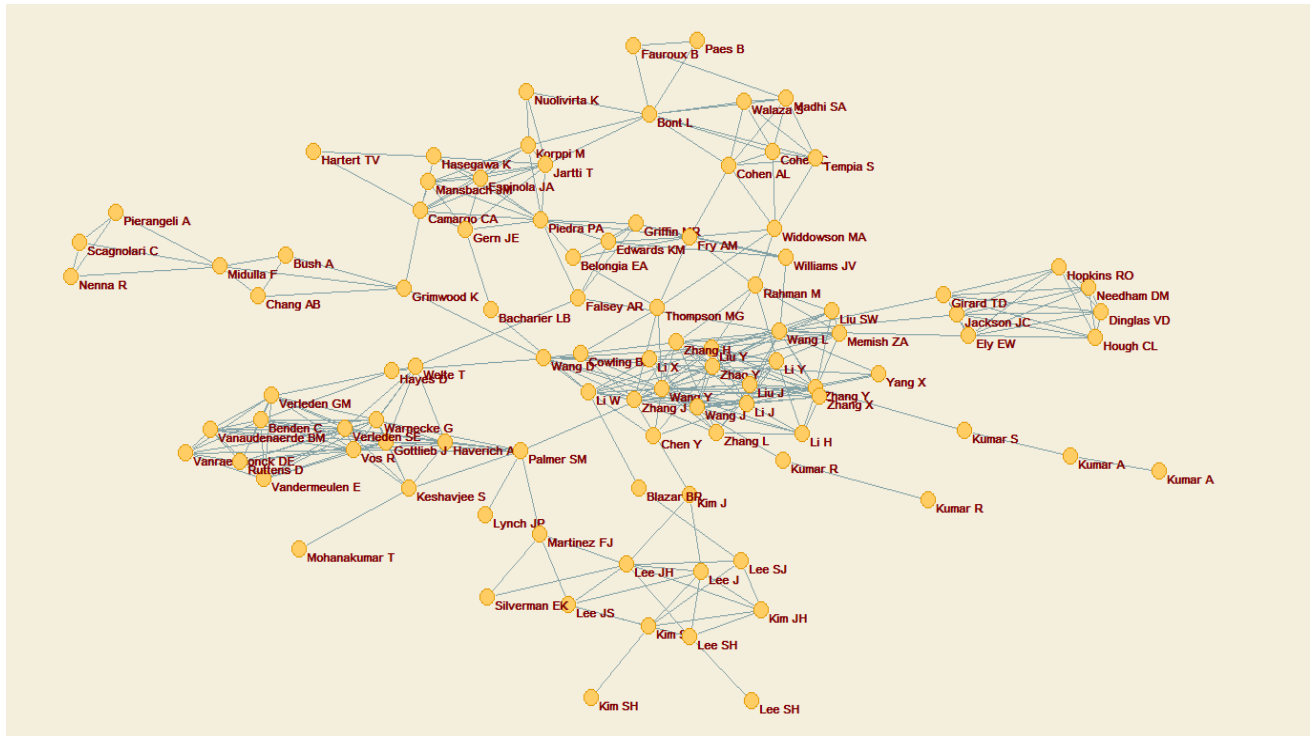
Table 5 elucidated different collaboration factors for the period of five years. The analysis of the table includes Collaborative Index, Collaborative Co-efficient, Modified Collaborative Co-efficient and Degree of Collaboration. The table revealed Collaborative Index at the highest in the year 2018 (5.873) and lowest range at the year 2015 (5.69). It is found that Degree of Collaboration was increasing and decreasing trend 0.96 to 0.95. In the study, CC is also lowest in 2015 showing 4.66974. It is at the highest rate of 4.76999 in 2017. The mean MCC during the period of study was 5.760759.

Table – 6: Top twenty Authors article distribution with Citation of Bronchitis Research

S.No	Authors	Citation sum within h-core	All citations	All articles	h-index
1	Needham DM	776	991	52	17
2	Ely EW	488	567	32	14
3	Memish ZA	6561	6617	24	14
4	Verleden GM	655	805	43	13
5	Li Y	1183	1243	41	13
6	Vos R	384	515	49	13
7	Belongia EA	546	595	27	13
8	Camargo CA	300	474	63	13
9	Blazar BR	462	528	26	12
10	Fry AM	388	476	31	12
11	Martinez FJ	608	641	25	12
12	Taylor RW	353	448	29	12
13	Verleden SE	274	395	40	12
14	Hough CL	369	429	24	12
15	Liu Y	4929	5061	46	12
16	Prokisch H	272	297	20	12
17	Matthay MA	597	630	20	12
18	Wang Y	978	1127	55	12
19	Gupta R	12428	12470	22	12
20	Mansbach JM	266	360	39	12

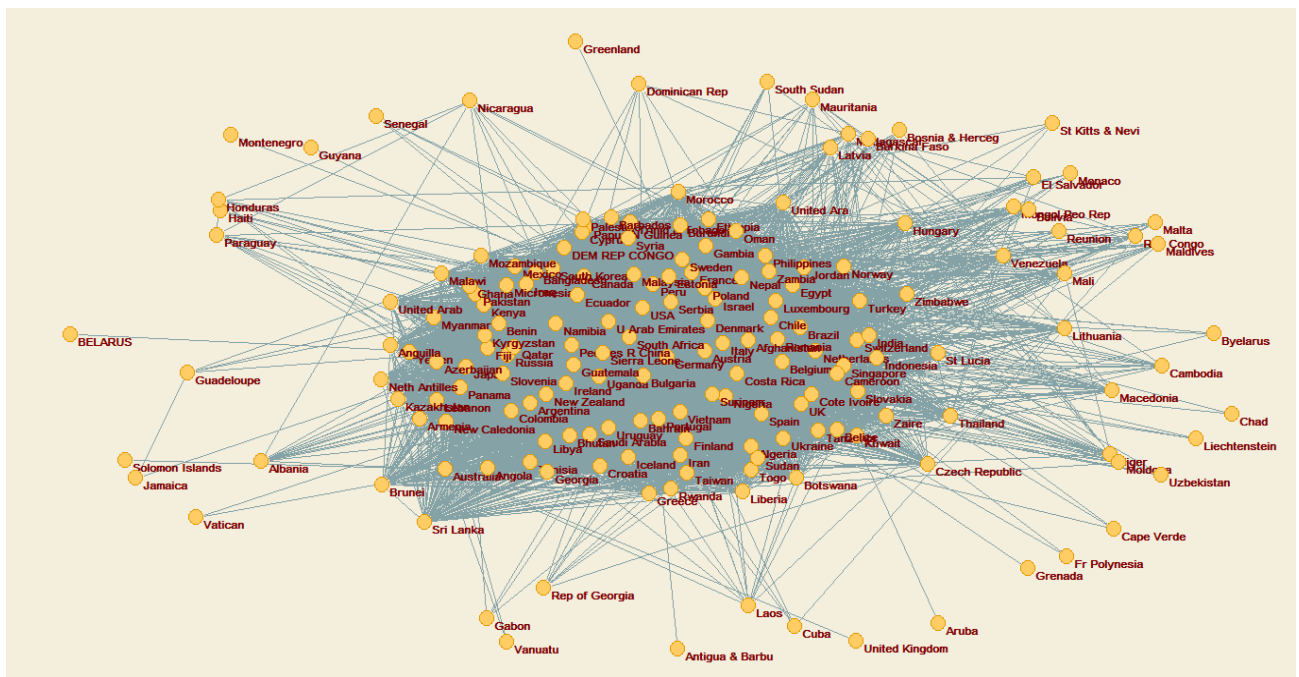
This table revealed that, top 20 author citation and h-index. The h-index of the authors in these top twenty authors, Needham DM have 52 article, citation 991 and h-index is 17. Ely EW have 32 publication, 567 citations and 14 h-index followed by, Memish ZA have 24 publications, 6617 citations and 14 h-index. And followed authors were h-index has 13 and 12 but citation and publications different values. Table 6 have been detailed about author h-index and citations.

Figure – 1: Mapping of Co-authors



This figure indicates that collaboration author of Bronchitis. Highest and lowest collaboration of authors declare in this figure.

Figure -2: Mapping of Country wise collaboration



This mapping draws in Pajek. It shows that country collaboration, Most of the authors collaborated in USA Countries.

Findings and Conclusion

This study concludes most (95.46%) of the total contribution represents the collaborative research. The degree of collaboration has been decreasing and increasing order 0.96 to 0.95 during the study period. The value of Collaborative index (CI) for 5.873 majority in the year 2018. This study also revealed that, mapping of collaborative authors and country collaboration. The Prolific author Chang AB has 115 publications and also first rank in ranked author list. The study concludes that multi author papers increasing trend other than Single authors. Most of the research activities in collaborations.

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