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Mapping of Neurological Science: A Scientometric study

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Abstract
This paper presents a methodological framework for the systematic literature review of. Output Mapping of Neurological Science, A Scientometric study1946 to 2018 pub-med database has been used to download Scientometric tools used in this study. Various application software has been used to present the datasets. Presented through graphs and using Excel mapping technique.

Keywords: Mapping, Neurological Science, Scientometric.

Introduction
The objective of the present study is to highlight need and importance of the study, objective, hypotheses and methodology of the study. Neurological Science Neuroscience1 is a scientific discipline that encompasses several areas and for this reason the term in plural is sometimes used. Neuroscientists investigate the different aspects that make up the nervous system: its structure, its functions, pathologies and molecular bases. Likewise, in this discipline the interactions between the different dimensions of the human brain are analyzed, since all of them serve to know the biological foundations of behaviour.

Definitional Analysis:
Mapping
Companies often use various tools and methods like mapping to organize their data and records. Professionals like data analysts and specialists can use the process of data mapping to analyses the gathered information and transform it into a suitable format. Understanding how the mapping process works can help you fulfill your data management requirements. In this article, we define data mapping, explain its usage and share different types of mapping methods to structure the database.

Scientometric
Scientometrics is a formed structural part of science including, the complex of mathematical and Statistical methods, used to analyse the quantitative characteristics of science as an enterprise Reverence, 1994. Many types of scent metrics data can be presented as transaction matrix. In all cases the matrix consists of a set of items assigned to each row and column with each cell containing the level of transaction between the row and column items Kretschmer, 1994Neurological Science a neuroscientist can specialize in a wide range of fields, from neuroanatomical to neuropsychology. Research in this field can improve our understanding of the brain and the body, how they work, and the health issues that affect them.

Developmental Neuroscience
This looks at how the brain and the nervous system grow and change, from conception through adulthood. Information gathered helps scientists understand more about how the neurological systems develop and evolve. It enables them to describe and understand a range of developmental disorders. It also offers clues about how and when neurological tissues regenerate.

Review of Literature
Tupe S.K & Khaparde V.S, (2016) [1] The Present study deals a Scientometric analysis of 4813 references appended to 217 articles contributed by the authors in Information Technology and Libraries on DOAJ during the period of 2005-2014. The study examines Authorship Pattern, Relative Growth Rate and Doubling Time of Articles, Year wise degree of collaboration. It is seen that the single authorship trend in increasing. The study revealed that most of the articles (57.14%) of articles were contributed by single authors. USA is the top producing country with 178 (82.03%) publications of the total output. The mean relative growth rate for the last five years 2010 to 2014 reduced to (0.13). While the Doubling time for different years [Dt(p)] gradually increased from (1.00) in 2006 to (7.70) in 2014. The mean doubling time for the first five years (i.e. 2005 to 2009) is only (1.69) which is increased to (5.69) during the last five years (2010 to 2014). The maximum references used print references i.e. 3154 whereas 1659 references were web references.
Sarabia-Salgado2020 [3]. Thus, it becomes more sustainable, since it simultaneously increases primary productivity, reduces nitrogen fertilization and the related greenhouse gas emissions, and increases carbon sequestration and soil biological activity
Bhagat Meenakshi Pandurang., Khaparde Vaishali. Fawaz Abdullah Alhamdi (2019) [2] Analyzed the study is based on the Scientometric analysis of 214 research articles covered during the periods of 2011- 2015 in SCOPUS Database. This study reviewed the length of title, numbers of pages, type of document, chronological distribution of articles, type of references, authorship pattern and author productivity. It revealed that the majority of articles i.e.121 articles are published by Australian contributors, followed by the USA and more than two-thirds, i.e.112 (55.80%), of papers were contributed by single authors. Most productive authors are

Beer A.M. contributed 23 Papers and Majority references are from print references with 1,722.

Mahajan, Gupta & Singh (2019) [5] have discussed the potentiality of MOOCs courses in continuing medical education programs and programs for improving soft skills and research skills for faculty members in the medical field. It also highlights the MOOCs application in medical education and assesses the feasibility of developing MOOCs in India. Gul, Mahajan& et.al (2018) have identified various issues and challenges faced by MOOCs and discussed the benefits of Open education to all by overcoming the barriers of time, space, which are pronounced in the traditional education system. Spring (2016) has discussed the important aspects of MOOCs in health education and highlighted the role of health librarian'sto collaborate in the development and delivery of health MOOCs.

Methodology

The research publications were retrieved from the Mapping of Neurological Science, A Scientometric study1946 to 2018 pub-med, which is scattered over the period from 1946 to 2018. The search was carried out using the Keyword Neurological Science.

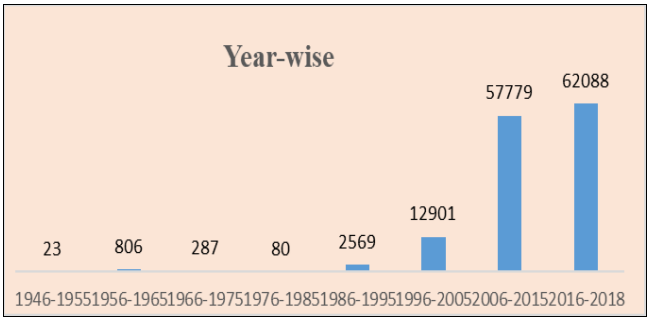
Objectives

- To Study the Year-wise Distribution of Publication.
- To Study the Authorship Pattern wise Distribution of Contribution.
- To Study the Country-wise Distribution of Contribution.
- To Study the Type of Document wise Distribution of Contribution.
- To Study the Journal wise Distribution of Contribution (Top 20).

Data Analysis and Interpretation

Table 1: Year Wise Distribution of Publication.

Sr. No	Year-Wise	Total Publication	%	Cum	Cum%
1	1946-1955	23	0.02	23	0.017
2	1956-1965	806	0.59	829	0.607
3	1966-1975	287	0.21	1116	0.817
4	1976-1985	80	0.06	1196	0.876
5	1986-1995	2569	1.88	3765	2.758
6	1996-2005	12901	9.45	16666	12.207
7	2006-2015	57779	42.32	74445	54.525
8	2016-2018	62088	45.47	136533	100
Total		136533	100		

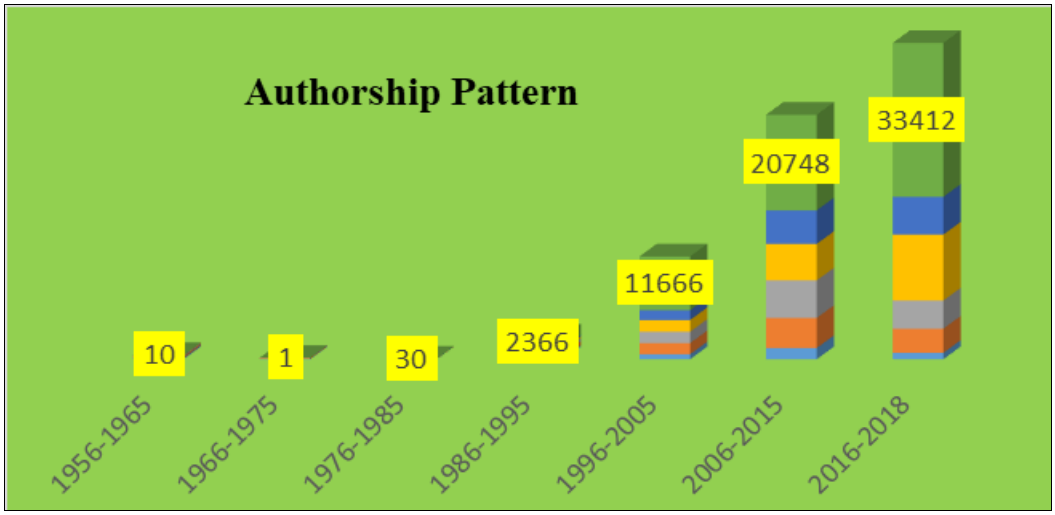


Graph 1: Year wise Distribution of Publications

Table No.1. and Graph No.1 shows the year-wise distribution Mapping of Neurological Science, A Scientometric Study The study analysis in Only articles in 1946-1955, 23 (0.02). Percentage 806(0.59) has the highest number of research documents 2016-2018. 62088 year 45.47 year wise distribution and growth pattern of articles for the period.

Table 2: Authorship Pattern. Distribution of Contribution.

Sr. No	Year	One Authors	Two Authors	Three Authors	Authors Four	Five Authors	More than 6
1	1946-1955	9	4	2	NA	NA	NA
2	1956-1965	251	329	224	60	23	10
3	1966-1975	85	114	65	15	7	1
4	1976-1985	27	25	10	4	1	30
5	1986-1995	289	804	699	471	280	2366
6	1996-2005	1073	2417	2482	2539	2132	11666
7	2006-2015	2424	6534	8155	7918	7303	20748
8	2016-2018	1384	5241	6122	14305	8208	33412
Total		5542(4.06%)	15468(11.33%)	17759(13.01%)	25312(18.54%)	17954(13.14%)	68233(49.98%)



Graph 2: Authorship Pattern Distribution of Contribution

Table No. 2. Graph No.2.Showed of the Authorship Pattern of research articles. In the rank analysis the authors who have published more than articles or more are considered into account to avoid a long list. during 1946-2018. Articles with articles, followed by with the collaboration was found to be linear and the growth pattern is steady. distribution Mapping of Neurological Science, A Scientometric Study The study analysis on, “Single Author”, “Two Authors”, “Three Authors”, Four author”, “five authors”, Six authors to More than authors, unidentified Author.

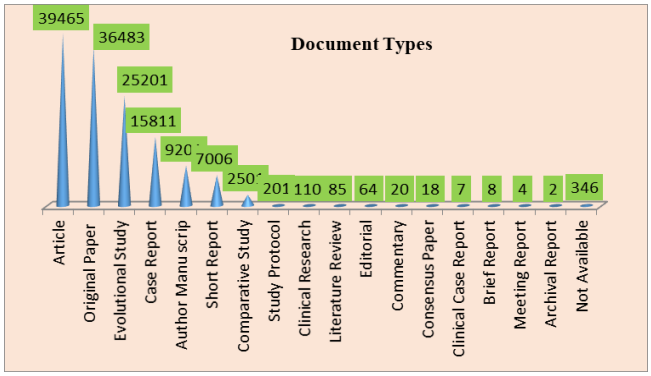
Table 3: Country-wise Distribution of Contribution

Sr. No	Country	Total Publication	Percentage%
1	USA	61848	45.30
2	South Korea	23619	17.30
3	China	10897	7.98
4	France	10500	7.69
5	Brazil	4017	2.94
6	Finland	4223	3.09
7	Russia	3897	2.85
8	Pakistan	3724	2.73
9	New Zealand	2961	2.17
10	Japan	2940	2.15
11	Germany	2823	2.07
12	Canada	2278	1.67
13	India	1675	1.23
14	Italy	1131	0.83
Total		136533	100

Analysis of the Publication Output1946-2018 Countries Table No.3.and figure. Displays the publication output of the top twenty countries by number of papers and USA country quires among the has the highest number of research countries. Majority of article been contributed form USA country, 61848(45.30%) contributors have been contributed form South Korea23619 (17.30%) contributors have been contributed from Peoples China 10897(7.98%) contributors have been contributed from France 10500(7.69%) contributors have been contributed minimum countries India 1675(1.23) have been Italy 1131(0.83) contributed from.

Table 4: Document wise distribution of Publications

Sr.NO	Document Types	Total Publication	%
1	Article	39465	28.91
2	Original Paper	36483	26.72
3	Evolutional Study	25201	18.46
4	Case Report	15811	11.58
5	Author Manuscript	9201s	6.74
6	Short Report	7006	5.13
7	Comparative Study	2501	1.83
8	Study Protocol	201	0.15
9	Clinical Research	110	0.08
10	Literature Review	85	0.06
11	Editorial	64	0.05
12	Commentary	20	0.01
13	Consensus Paper	18	0.01
14	Clinical Case Report	7	0.01
15	Brief Report	8	0.01
16	Meeting Report	4	0.00
17	Archival Report	2	0.00
18	Not Available	346	0.25
Total		136533	100

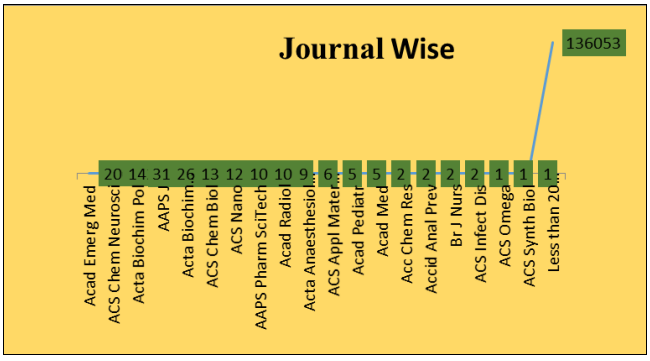


Graph 3: Document wise Distribution of article

Table No.4 Graph No. 3 presents Documents Types 1946-2018 used by the researchers in their publications. In terms of documents types which are covering Mapping of Neurological Science, a Scientometric Study. Its related fields. Of 136533 total publications “Article”39465(28.91%) with “Original Paper” 36483 (26.72%) with “Evolutional Study”25201(18.46%). with“Case Report”15811 (11.58%) with theAuthor Manuscript, 9201(6.74) withShort Report, 7006(5.13%) respectively.

Table 5: Journal wise Distribution of Publication (Top 20)

Sr. No	Journal wise	Publication	Percentage
1	AcadEmerg Med	200	0.15
2	ACS Chem Neurosci	142	0.1
3	Acta Biochim Pol	31	0.02
4	AAPS J	26	0.02
5	Acta Biochim Biophys Sin (Shanghai)	13	0.01
6	ACS Chem Biol	12	0.01
7	ACS Nano	10	0.01
8	AAPS Pharm SciTech	10	0.01
9	AcadRadiol	9	0.01
10	Acta AnaesthesiolScand	6	0
11	ACS Appl Mater Interfaces	5	0
12	AcadPediatr	5	0
13	Acad Med	2	0
14	Acc Chem Res	2	0
15	Accid Anal Prev	2	0
16	Br J Nurs	2	0
17	ACS Infect Dis	1	0
18	ACS Omega	1	0
19	ACS Synth Biol	1	0
20	Less than 20 Research output affiliated Journal	136053	99.65
	Total	136533	100



Graph 4: Journal wise Distribution of Publication

Table No.5Graph No. 4 the study found that the total research output of the osteoarthritis for the study period (1946–2018) published in 136533 journals. In Table 5 The journal "Acad Emerg Med" topped with 200(0.15%) publications with the, next "ACS Chem Neurosis" with 142(0.10%) publications with the "Acta Biochim Pol" of with 31(0.02%) publications with the Remaining journals are having less than Less than 20 Research output affiliated Journal 136053 of Total 136533 literature.

Conclusion

The number of papers published in Neurological Science has gradually increase during 1946-2018 and the study has shown that 136533 research documents have been published in Social Science during the period. Total 72 years; downloaded sample records 136533; publications Mapping of Neurological Science, A Scientometric study Block year-wise, highest number of research documents 2014-2018, 62088 (45.475%). Analyses the Authorship Pattern and examine the extent of Research Collaboration. To find out Country-wise Distribution of Contribution in, highest number of research Country USA61848 (45.30%) To find out the Document wise distribution of articles highest number of research documents Evolutional Study 30601(22.41%) Journal wise Distribution of Publication (Top 20).

References

1. Tupe SK, Khaparde VS. Scientometric study on journal of information technology & libraries on DOAJ. "Knowledge Librarian" An International Peer Reviewed Bilingual EJournal of Library and Information Science,2016:3(3):10-26.
2. Bhagat Meenakshi Khaparde Fawaz Abdullah Alhamdi Naturopathy Output: A Scientometric Study in Scopus Database PEARL - A Journal of Library and Information Science,2019:13(3):245-252.
3. Sarabia-Salgado L, Solorio-Sanchez F, Ramirez-Aviles L, Rodrigues Alves BJ, Ku-Vera J, Aguilar-Perez C. Increase in milk yield from cows through improvement of forage production using the N2- fixing legume Leucaenaleucocephala in a silvopastoral system. Animals,2020:10:734. https:// doi.org/ 10. 3390/ ani10 040734.
4. Roberts Joni R, Drost Carol A. Library, Information Science andTechnology.College & Research, Libraries News,2006:67(2):110-111.
5. Mahajan R, Gupta P, Singh T. Massive Open Online Courses: Concept and Implications. Indian Pediatrics,2019:56(6):489-495. 10.1007/s13312-019-1575-6.