SCIENTOMETRIC ANALYSIS OF CAT RESEARCH 1975–2019 USING CAB DIRECT

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ABSTRACT

Research in cat research for the period 19752019, obtained from the CAB Direct Online database via scientometric analysis. The analysis found that 12708 papers were published during the period from 1975 to 2019, and the largest number of papers was 1378 papers published in 2015. The most competitive ranking journal is Argos-informative Vaterinario, with 377 papers (2.96 %) publishing their research papers in the most influential 10 journals. With 684 papers (5.38 %), Brazil may be the world's leading country, followed by USA (2.57 %) and Spain (2.10 %).

KEYWORDS: *Scientometric, Cat, CAB Direct, Relative Growth Rate, Doubling Time*

INTRODUCTION

The cat (Fellis catus) is a small carnivorous animal of a domestic genus. It is the only domesticated animal of the felidae family, and is sometimes called the domestic cat to differentiate it from the family's wild members. A cat can be a house cat, a farm cat or a wild cat; the latter travels freely and avoids interaction with humans. Indoor cats are valued for companionship by humans and their ability to kill rodents. Various cat registries identify about 60 cat breeds. In anatomy, the cat is similar to the other felid species: it has a strong flexible body, fast reflexes, sharp teeth and retractable grips adapted to kill small prey. Its vision of the night and sense of smell are well established. Animal contact involves vocalizations such as meowing, purring, trilling, hissing, growling, grunting and animal specific body language. It is just a social animal, a solitary hunter. For human ears, like those made by mice and other small mammals, it may hear sounds too low or too high in frequency. It is a predator, which is most active in the morning and in the evening. It secretes pheromones and perceives them. With litter sizes ranging from two to five kittens, female domestic cats may have kittens from spring to late autumn. Domestic cats are bred as registered pedigree cats, a hobby known as cat fancy, and exhibited at events. Failure to control pet cats breeding through spaying and neutering, as well as abandoning pets resulted in large numbers of feral cats Worldwide, contributing to the extinction of whole bird species and evoking population control. The cats were first domesticated around 7500 BC in the Near East. Cat domestication was long thought to have been initiated in Ancient Egypt, since cats in ancient Egypt had been given veneration around 3100 BC. As of 2017, the domestic cat was the second most common pet in the U.S by number of pets owned by 95 million owners, behind freshwater fish. As of 2019, about 7.3 million cats resided in more than 4.8 million households in the United Kingdom.

OBJECTIVES OF THE STUDY

The main objective of this study is to research, the results of the analysis in Cat research, as reflected in the CAB Direct Online database throughout 19752019 in its publications output. The analysis focuses, in the exacting, on the following objectives:

- CAB Direct Online database supported for the period 1975-2019 in order to examine the overall range of publications output on cat research analysis.

- Identify publications forms.

- Studying the top 10 journals publishing more research papers on analysis of cat.

- Identify the top 10 authors in cat analysis field.

- To identify the highest rank-wise countries in the analysis of cat.

- Identify the language distribution of an analysis of cat.

METHODOLOGY

For the 45 years (19752019), the CAB Direct Online database was used to retrieve the data by looking into the keyword 'Cat' inside the title area. The entire array of records collected from the CAB Direct Online database is 12708.

RESULTS AND ANALYSIS

The data obtained from the CAB Direct Online database on the cat research has been analyzed and presented different types of statistical tools such as Tables are used for presenting the results.

Growth Rate and Doubling Time in Cat Research Output

A study of the growth rate of the performance of cat research is an essential factor in the analysis of field research and production. Table 1 indicates no publications on these years (19761982, 19841986, 1988, 19901991, 1993, 1999), the relative growth rate in the cat or the study production. Citations are extracted from the Relative Growth Rate and Doubling Time and described in Table-1. It can be found that the relative growth rate of publication decreased and increased, but not a constant from the rate 0.15 in 2001 to 1.11 in 2003 i.e. the frequency of the growth has been varied. The mean relative growth for the 45 years period (19752019) showed a growth rate of 0.32 while the corresponding doubling time for specific year steadily increased from 1.24 to 4.62 in (19982001) and 2.47 to 5.33 in (20092013). For the 45 years (19752019), the mean doubling time was just 3.31 which were increased in the subsequent doubling time.

Table 1: Relative Growth Rate [R(c)] and Doubling Time [Dt(C)] of Overall Research Output

S.No	Year	No. of Publications[x]	Cumulative No. of Output [y]	Log_e1^{y-x}	Log_e2^{y-x}	[R(c)]	Mean [R(c)]	[Dt(C)]	Mean [Dt(C)]
1.	1975	1	1	0	0	0		0	
2.	1983	3	4	0	1.38	1.38		5.05	
3.	1987	1	5	1.38	1.60	0.22		3.15	
4.	1989	10	15	1.60	2.70	1.1		6.33	
5.	1992	13	28	2.70	3.33	0.63		1.10	
6.	1994	1	29	3.33	3.36	0.03		2.31	
7.	1995	11	40	3.36	3.68	0.32		2.16	
8.	1997	1	41	3.68	3.71	0.03		2.31	
9.	1998	31	72	3.71	4.27	0.56	0.32	1.24	3.31
10.	2000	19	91	4.27	4.51	0.24		2.89	
11.	2001	15	106	4.51	4.66	0.15		4.62	
12.	2002	36	142	4.66	4.95	0.29		2.39	
13.	2003	289	431	4.95	6.06	1.11		6.27	
14.	2004	267	698	6.06	6.54	0.48		1.44	
15.	2005	303	1001	6.54	6.90	0.36		1.92	
16.	2006	505	1506	6.90	7.31	0.41		1.69	
17.	2007	540	2046	7.31	7.62	0.31		2.23	
18.	2008	562	2608	7.62	7.86	0.24		2.89	
19.	2009	825	3433	7.86	8.14	0.28		2.47	
20.	2010	881	4314	8.14	8.36	0.22		3.15	
21.	2011	821	5135	8.36	8.54	0.18		3.85	
22.	2012	765	5900	8.54	8.68	0.14		4.95	
23.	2013	865	6765	8.68	8.81	0.13		5.33	
24.	2014	1150	7915	8.81	8.97	0.16		4.33	
25.	2015	1378	9293	8.97	9.13	0.16		4.33	
26.	2016	1374	10667	9.13	9.27	0.14		4.95	
27.	2017	763	11430	9.27	9.34	0.07		9.90	
28.	2018	729	12159	9.34	9.40	0.06		1.15	
29.	2019	549	12708	9.40	9.44	0.04		1.73	
Total		12708							

Preferred Kinds of Publications

The study shows that conference paper with 5867 papers (46.16 %) accompanied by a journal article with 4760 papers (37.45 %) is the key source of publications coated by CAB Direct Online database for cat research. Third place book chapter with 1832 (14.41 %), Bulletin article and Miscellaneous are in fourth and fifth places with 203 (1.5 %) and 40 (0.3 %) different. Table 2 furnishes the highest 7 varieties of publications.

Table 2: Top 7 Kinds of Publications

S. No	Kinds of Document	No. of Papers	Percentage
1.	Conference Paper	5867	46.16
2.	Journal article	4760	37.45
3.	Book Chapter	1832	14.41
4.	Bulletin article	203	1.5
5.	Miscellaneous	40	0.3
6.	Editorial	4	0.03
7.	Correspondence	2	0.01

Most Popular Journals

Argos-informative Vaterinario with 377 papers (2.96 %); followed by Taiwan journal of forest science with 282 papers (2.21 %) were the most common of the scientists concerned with cat research. The study revealed that 257 papers (2.02 %) and Small animal and exotics proceedings of the North American veterinary conference Vol.21, 2007, 255 papers (2.00 %) were published out of the high five most prominent cat researcher's journals, three journals viz., Small animal and exotics proceedings of the north American veterinary conference, USA-2009, 271 papers (2.13 %) and Small animal and exotics proceedings of the north American veterinary conference, Vol.20, 2006. Table 3 lists the top 10 most popular journals, with the amount of papers reported.

Table 3: Popular Journals

S. No	Journal Name	No. of Papers	Percentage
1.	Argos-informative Vaterinario	377	2.96
2.	Taiwan journal of forest science	282	2.21
3.	Small animal and exotics proceedings of the north American veterinary conference, USA-2009	271	2.13
4.	Small animal and exotics proceedings of the north American veterinary conference, Vol.20, 2006	257	2.02
5.	Small animal and exotics proceedings of the north American veterinary conference Vol.21, 2007	255	2.00
6.	The north American veterinary conference 2003 small animal and exotics, USA	251	1.97
7.	Proceedings of the NAVC conference, USA, 2015	243	1.91
8.	Small animal and exotics proceedings of the north American veterinary conference, USA, 2011	243	1.91
9.	Small animal and exotics proceedings, north American veterinary conference, USA, 2013	233	1.83
10.	Small animal and exotics proceedings of the north American veterinary conference, USA, 2010	228	1.79

Prolific / Ranking Authors

The study reveals that Gething, M is the most prolific / Ranking authors of cat analysis who reported 128 papers (1.00 %) followed by 127 papers (1.00 %) from Svoboda, M. It is observed that out of the top five authors who contributed a lot of papers in cat analysis, the world ranking author contributed a paper level of 84 to 128 viz., Vezzoni, A 101 papers (0.79 %), Bernues Jal, A 84 papers (0.66 %). Table 4 lists the top 10 prolific/ranking authors in the cat analysis field.

Table 4: Top 10 Prolific / Ranking Authors

S. No	Name of Author	No. of Papers	Percentage
1.	Gething, M	128	1.00
2.	Jones, B	128	1.00
3.	Svoboda, M	127	0.99
4.	Vezzoni, A	101	0.79
5.	Bernues Jal, A	84	0.66
6.	Blanco Alibes, M	84	0.66
7.	Calvo Lacosta, J.H	84	0.66
8.	Latorre Gorriz, M.A	84	0.66
9.	Palacio Liesa, J	84	0.66
10.	Ripoll Garcia, G	84	0.66

Rank-Wise Countries Distribution of Publications

The study reveals that Brazil is the top country in cat research with 684 papers contributing almost (5.38 %) of the global cat research output followed by USA with 327 papers (2.57 %), Spain ranks third with 267 papers (2.10 %), Italy ranks fourth with 234 (1.84 %) and Taiwan ranks with 189 papers (1.48 %) out of Brazil 10 nations. The top 10 countries are furnished in Table 5, based on a variety of publications.

Table 5: Rank-wise Countries

S. No	Location	No of Articles	Cumulative Publications	Cumulative Percentage of Articles (%)
1.	Brazil	684 (5.38)	684	5.38
2.	USA	327 (2.57)	1011	7.95
3.	Spain	267 (2.10)	1278	10.0
4.	Italy	234 (1.84)	1512	11.8
5.	Taiwan	189 (1.48)	1701	13.38
6.	Romania	176 (1.38)	1877	14.7
7.	Turkey	172 (1.35)	2049	16.1
8.	Iran	167 (1.31)	2216	17.4
9.	India	159 (1.25)	2375	18.6
10.	China	143 (1.12)	2518	19.8

Predominant Languages

It is observed that English, with 10104 papers (79.5 %) followed by Spanish with 913 (7.18 %) and Portuguese with 608 (4.78 %) is the most prevalent language used by the researchers in cat research. Table 6 furnishes the top 10 predominant languages.

Table 6: Types of Language

S. No	Language	No. of Papers	Percentage
1.	English	10104	79.5
2.	Spanish	913	7.18
3.	Portuguese	608	4.78
4.	Chinese	447	3.51
5.	Italian	232	1.82
6.	Polish	105	0.82
7.	Turkish	101	0.79
8.	Russian	62	0.48
9.	Croatian	61	0.48
10.	Persian	50	0.39

CONCLUSIONS

The scientometric analysis based on cat analysis from the CAB Direct Online database shows that, Brazil is the leading source of scientific research production with 684 publications, around (5.38 %) of the total output from the 10 countries. The other interesting aspect is that Gething, M and Jones, B with 128 papers (1.00 %), followed by Svoboda, M with 127 papers (0.99 %) are the most prolific ranked authors in the area. It is observed that out of the top five authors who contributed a lot of papers in cat research, world ranking author has contributed a paper level of 0.66 to 1.00 viz., Vezzoni, A 101 papers (0.79 %), and Bernues Jal, A 84 papers (0.66 %). The study reported that the Argos-informative Vaterinario with 377 papers (2.96 %) followed by 282 papers (2.21 %) from Taiwan forest science journal from among the top five most preferred journals. The research stated that three journals, the North American veterinary conference's Small animal and exotics proceedings, USA-2009, 271 papers (2.13 %) and the North American veterinary conferences, Small animal and exotics proceedings of Vol.20, 2006 were among the top five most popular cat researcher's journals.

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