

Mapping the Literature of Siddha Medicine from 1972-2024: Scientometrics Analysis

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ABSTRACT

Siddha Medicine is an older traditional medicine system that originated in south India and boasts various treatments for various ailments. To learn about its recent developments, researchers conducted a study analysing Siddha medicine literature from 1972 to 2024 and the data obtained from the PubMed database. The study examined factors such as year of publication, prominent author contribution, communication channels, and country-wise production. Findings revealed that India is the leading contributor in this field and the period from 2022 to 2024 had the largest growth rate in Siddha literature, followed by 2012–2016. The average growth rate of Siddha literature per year is 16.67%. The maximum number of publications (16.41%) are triple-authored followed by 15.63% and 14.06% of publications that are four-authored and single-authored respectively. The Thaavaram domain has the highest number (41) of publications followed by the History of Siddha, Clinical Trials, and Miscellaneous work domain with 37, the Thaathu domain with 32 and Jangamam domain with 18 publications. Sathiyarajeswaran P. has published the highest number (5.47%) of publications, followed by Anbarasi C, Ignacimuthu S, Mutheeswaran S and Pandikumar P. has published 6 each, accounting for 4.69% of the total number of publications. The majority (72.66%) of the literature on Siddha medicine is published in the form of journal articles and no literature is published in the form of books. The Journal of Ayurveda and Integrative Medicine holds the highest number (13.28%) of publications, followed by the Ancient Science of Life and the Journal of Ethnopharmacology. The study implies that development in research activity and interest in the literature on Siddha medicine has been noticeable in recent years. There is a diverse range of publications that contribute to the field, however, some topics and document formats receive more attention than others. Indian contributions emphasise the significance of Siddha medicine in it. However, more analysis into publication routes, document types, and collaboration patterns may provide a more in-depth insight into how Siddha medicine research is evolving.

KEYWORDS: Mapping, Literature, Siddha Medicine, Scientometrics, and Bibliometrics.

1. INTRODUCTION

Siddha medicine is an ancient system that originated in South India and is considered one of the oldest medical systems (Gannekar & Tiwari, 2023). It is deeply rooted in the Dravidian culture and is practiced today (S.Sivakkumar & Meenakumari, 2020). The Siddha system posits that every individual is a microcosm of the universe. Health is maintained by the balance of the three humours—vata, pitta, and kapha—along with the five primordial elements: earth, water, fire, air, and space (V et al., 2020). Siddha medicine encompasses a holistic approach, including aspects of Vaatham (air), Vaithyam (medicine), Yogam (yoga), and Gnanam (knowledge), aiming to address both physical ailments and mental health disorders like depression (G, 2020). It has shown significance in treating various contemporary diseases, including HIV, hepatitis B, diabetes, and obesity.

The system employs a wide range of treatments, including herbomineral formulations, which are emphasised for their potential in treating disorders like gastrointestinal tract ulcers, cancer, severe asthma, and eye diseases. Siddha medicine also utilizes unique preparations such as Annakaadi (rice vinegar) and other special ingredients to detoxify and treat various illnesses (Sugunthan et al., 2022). In terms of public health, Siddha medicine is widely known for its antiviral properties and is gaining awareness for its role in treating viral infections. Moreover, it has been suggested that a complementary system alongside biomedicine, particularly in the management of Non-communicable diseases (NCDs) including diabetes, cancer, chronic respiratory problems, and heart disease, which are prevalent causes of death in India (Rajalakshmi et al., 2020). The Siddha system also emphasises the importance of diet, daily regimen, and yogic practices in maintaining health and treating diseases. For instance, in the management of diabetes mellitus, Siddha medicine offers a comprehensive treatment guideline that includes pharmacological and non-pharmacological regimens, dietary advice, and preventive measures (Thenmozhi et al., 2021).

Despite its rich tradition and potential benefits, Siddha medicine faces challenges such as language barriers that limit its global reach and the need for more scientific proof to include it in mainstream healthcare (Karmegam et al., 2022). Nevertheless, ongoing research and clinical studies aim to confirm the efficacy and importance of Siddha formulations, particularly in the treatment of diabetes (Gaddam et al., 2019). Siddha medicine represents a comprehensive medical system with a rich history and a holistic approach to health. It offers a wide array of treatments for various diseases and conditions, with an emphasis on balance and harmony within the body and mind. While it is deeply respected within its cultural context, further research and validation are essential for its broader acceptance and integration into global healthcare systems. It provides a framework for analysing the structure and dynamics of scientific research, aiding in the identification of influential works and emerging trends within various fields. However, it is necessary to use Scientometric methods judiciously and in conjunction with qualitative assessments to ensure a comprehensive evaluation of scholarly contributions.

2. LITERATURE REVIEW

Scientometric, a quantitative method for analysing research literature, has been increasingly applied in medicine to understand the patterns of publication, historical evolution, and research hotspots (Kokol et al., 2021). The application of Scientometric in medicine allows for the analysis of research trends, the identification of core topics, and the evolution of clinical areas over time. For instance, a study analysing the historical perspective of

Scientometric application in medicine from 1970 to 2018 found a positive trend in literature production, indicating a growing interest in and application of Scientometric methods in this field. In the context of specific medical domains, Scientometric has been used to analyse the immunological aspects of traditional Chinese medicine (TCM), revealing rapid increases in publication numbers, dominant contributing countries, and emerging research hotspots such as inflammation and oxidative stress (Bai et al., 2019). Similarly, Scientometric methods have been employed to observe the development of TCM health maintenance literature, providing insights into the historical and cultural significance of these works (Chen et al., 2023). This study provides a Scientometric analysis of herbal medicine research in obesity over the past two decades. Retrieving 463 English articles from the Web of Science Core Collection demonstrates a steady increase in publications in this area. Korea and Kyunghee Universities emerge as the most prolific countries and institutions, respectively. Key research areas include pharmacology pharmacy and integrative complementary medicine, with leading journals being the Journal of Ethnopharmacology and Evidence-Based Complementary and Alternative Medicine. Three clusters of main research keywords were identified, highlighting topics such as "obesity," "adipose tissue," and "insulin resistance." This overview offers insights into evolving research trends and can inform future directions in obesity research using herbal medicine (Seo et al., 2022). Another study was conducted This study examines the representation of authors from high-income countries (HICs) compared to those from low and middle-income countries (LMICs) in global emergency medicine (EM) research. Analyzing original research articles from 2016 to 2020 conducted in LMICs reveals significant disparities in authorship. HIC-affiliated authors are overrepresented, particularly in prominent authorship positions. Notably, only a minority of first and last authors are affiliated with LMIC study countries, with upper MICs and studies funded by the study country showing greater odds of having a local first author. The findings underscore the need to address power imbalances and enhance support for EM researchers in LMICs, especially in low-income countries (LICs), through innovative funding opportunities and other initiatives (Garber et al., 2022).

3. OBJECTIVE OF THE STUDY

- ✓ To assess year-wise publications in the Siddha medicine domain during 2006-2024.
- ✓ To determine prominent contributors in Siddha Literature.
- ✓ To find authorship patterns in scientific productivity.
- ✓ To investigate the use of channels of communication.

4. METHODOLOGY

Scientometrics is the statistical method of assessing research literature growing in popularity in medicine to evaluate publication patterns, historical evolution, and academic hotspots.

Database name	PubMed
Search Term	Siddha*[Title]
Total Results	128 (1972-2024)

Siddha medicine (1972-2024) was analysed using Scientometrics methods, where 128 papers were collected from the PubMed database and incorporated with R-Studio and MS Excel spreadsheet software. Normal count procedure was applied, and the publications were classified into four domains, and the results were analyzed and interpreted for logical conclusion.

5. DATA ANALYSIS AND INTERPRETATIONS

5.1 Year-wise Growth of Siddha Literature

Table 1 and Figure 1 represent the number of publications published from 1972 to 2024 in the Siddha medicine domain. The period with the highest growth rate (27.34%) is registered in 2022-2024 followed by 25 (19.53%) in 2012-2016 and the least i.e. 1(0.78%) publication was found during the period from 1976-1981. The average growth rate of Siddha literature per year is 16.67%. The most recent period from 2022-2024, shows a substantial increase in the number of publications, indicating perhaps an acceleration in research and publication activity in Siddha literature.

Table - 1 Year-wise Growth of Siddha Literature

Year	Publications	%	Cumulative
1972-1975	7	5.47	7
1976-1981	1	0.78	8
1982-1986	4	3.13	12
1987-1991	4	3.13%	16
1992-1996	6	4.69%	22
1997-2001	6	4.69%	28
2002-2006	3	2.34%	31
2007-2011	14	10.94%	45
2012-2016	25	19.53%	70
2017-2021	23	17.97%	93
2022-2024	35	27.34%	128
Total	128	100.00%	

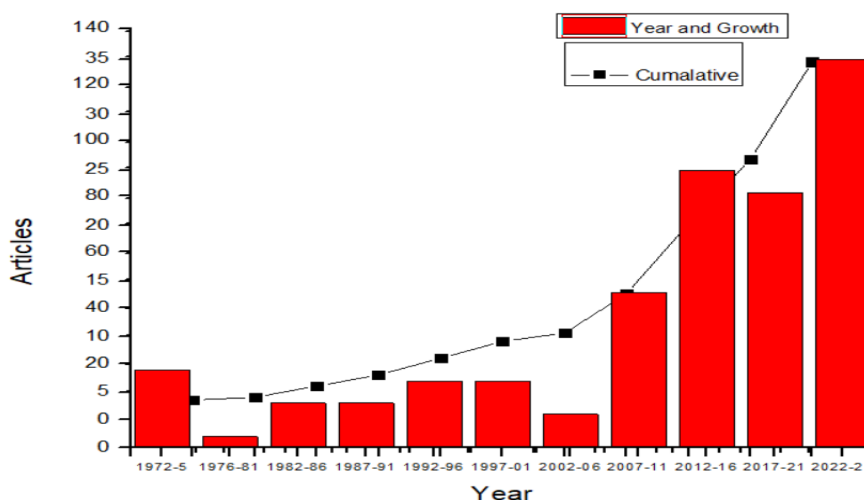


Figure -1 Year-wise growth of Siddha Literature

5.2 Authorship Pattern

Table 2 and Figure 2, depict the authorship pattern in published literature. A maximum number of publications (16.41%) are triple- authored followed by 15.63% and 14.06% of publications that are four-authored and single-authored respectively. Only one publication (0.78%) is authored by 9 persons and the same number of publications i.e. 3.13% have 10 authors and 3.13% have no author data available.

Table-2 Authorship Pattern

Authorship Pattern			
Authorship	Articles	%	Cumulative
1	18	14.06%	18
2	11	8.59%	29
3	21	16.41%	50
4	20	15.63%	70
5	11	8.59%	81
6	13	10.16%	94
7	12	9.38%	106
8	6	4.69%	112
9	1	0.78%	113
10	4	3.13%	117
>10	7	5.47%	124
No authors data	4	3.13%	128
Total	128	100.00%	

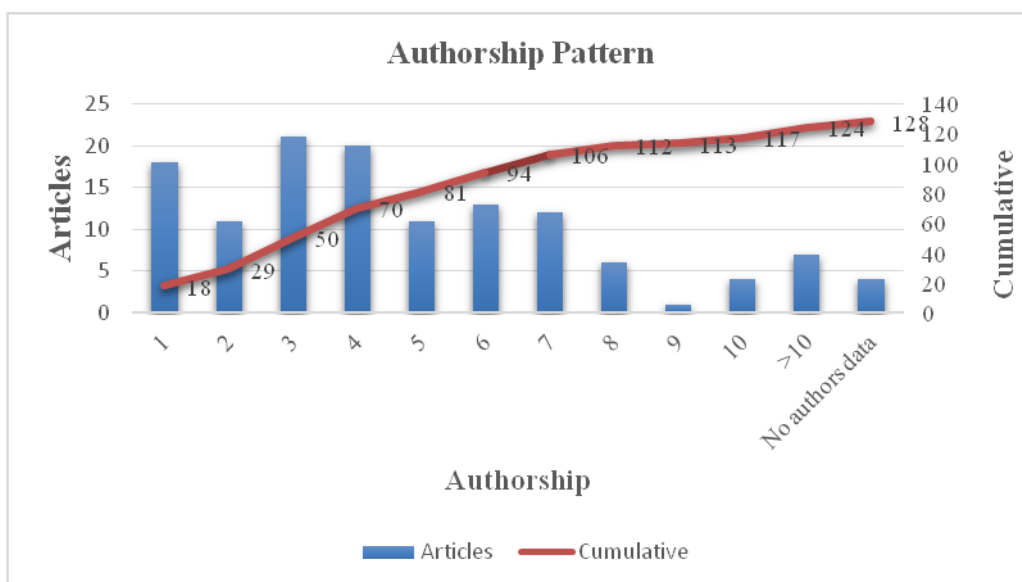


Figure-2

5.3 Domain-wise Publications in Siddha Literature

A = *Thaavaram*: Made of Herbal products.

B = *Thaathu*: Made of Inorganic substances.

C = *Jangamam*: Made of Animal products

D = History of Siddha, Clinical Trials, and Miscellaneous work

Table 3 and Figure 3 illustrate the domain-wise publications in Siddha medicine literature from 1972 to 2024. It is observed that the Thaavaram domain has the highest number(41) of publications in which 8 and 7 publications are triple authored and 4 authored respectively. In the case of 32 publications in the Thaathu domain, the maximum i.e. 7 and 6 are four-authored and triple authored respectively. Jangamam domain has 18 publications where 3 each are authored by 5 and 4 persons each. The highest number (11) of 37 publications on the History of Siddha, Clinical Trials, and Miscellaneous works are single-authored. Collaboration coefficients provide information about the level of collaboration between authors in various disciplines. Domains A, B, and C have higher CC and MCC respectively 0.723, 0.695 and 0.695 than domain D 0.546, this shows these areas are more collaborative.

Table -3 Domain publication in Siddha medicine Literature 1972-2024

No. of Authors	Domains				Total no. of papers in Authorship	%
	A	B	C	D		
1	3	2	2	11	18	14.52%
2	2	4	1	4	11	8.87%
3	8	6	2	5	21	16.94%
4	7	7	3	3	20	16.13%
5	4	2	3	2	11	8.87%
6	4	4	2	3	13	10.48%
7	4	5	2	1	12	9.68%
8	2	1	2	1	6	4.84%
9	1	0	0	0	1	0.81%
10	2	0	1	1	4	3.23%
>10	4	1	0	2	7	5.65%
	41	32	18	37	128	100.00%
				No data-04		
DC	0.3203	0.25	0.1406	0.289		
CC	0.723	0.695	0.695	0.546		
MCC	0.741	0.717	0.736	0.561		

DC Degree of Collaboration, **CC** Collaboration coefficient, and **MCC**= Modified collaborative coefficient (Savanur & Srikanth, 2010).

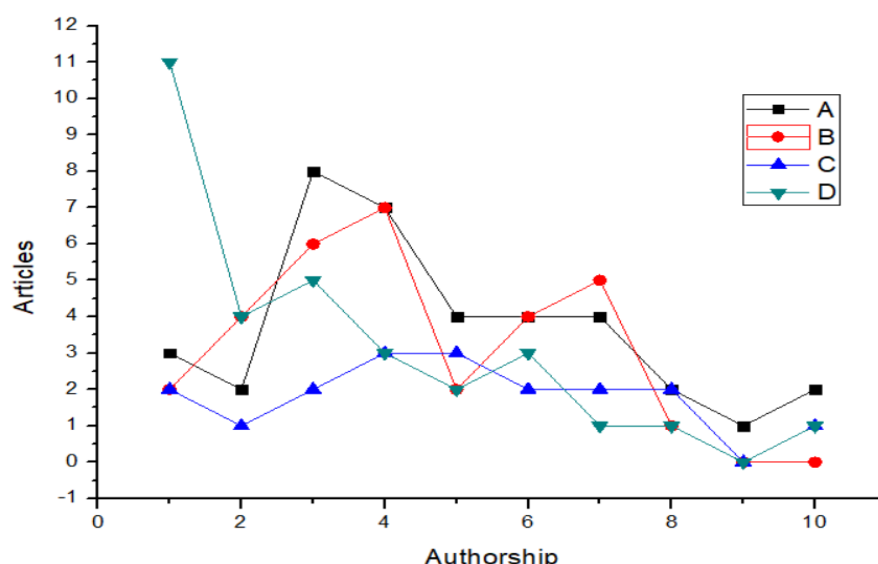


Figure-3 Authorship pattern in Siddha Medicine Literature 1972-2024

5.3 Top contributor to Siddha medicine literature

Table 4 and Figure 4 display the top contributors in Siddha medicine literature. It is found that Sathiyarajeswaran P. has published the highest number i.e. 7(5.47%) of publications, followed by Anbarasi C, Ignacimuthu S, Mutheeswaran S and Pandikumar P. having published 6 each, accounting for 4.69% of the total number of publications. Sachdanandam P, Alam M, Anandan T, Kanakavalli K, Natarajan S, and Vasanthi HR have published 4 articles each, accounting for 3.13% of the total. Most(393) of the authors have published one each publication.

Table-4

Top contributor in Siddha medicine literature (1972-2024)		
Sathiyarajeswaran P	7	5.47%
Anbarasi C	6	4.69%
Ignacimuthu S	6	4.69%
Mutheeswaran S	6	4.69%
Pandikumar P	6	4.69%
Sachdanandam P	5	3.91%
Alam M	4	3.13%
Anandan T	4	3.13%
Kanakavalli K	4	3.13%
Natarajan S	4	3.13%
Vasanthi HR	4	3.13%
Total publication	128	43.78%
3 articles for each authors-19	57	
2 articles for each authors-49	98	
1 article for each author-393	397	
Total Authors	476	

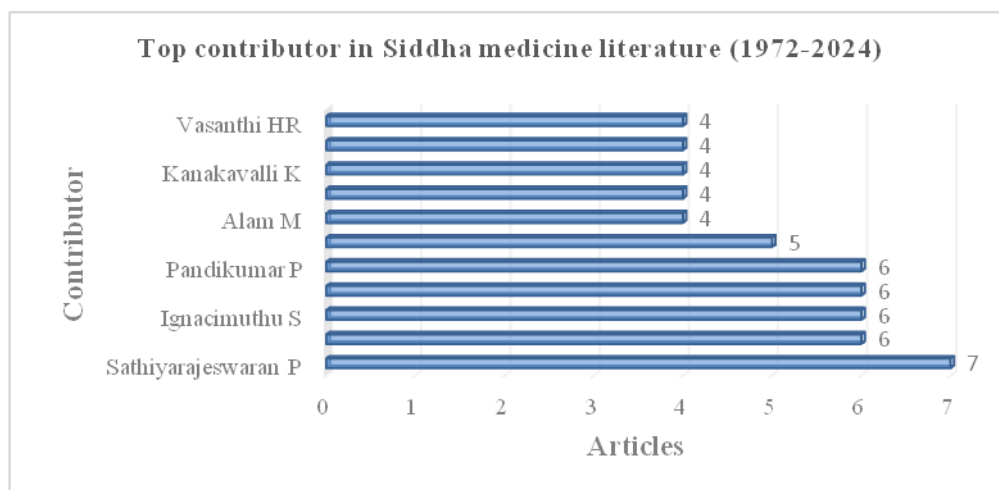


Figure-4

5.4 Lotka's Law of Scientific Productivity

According to Lotka's (1926) Inverse Square Law of Scientific Productivity, the number of authors providing 'n' contributions is approximately equivalent to $1/n^2$ of the number of authors making only one contribution (Rajgoli et al., 2017). For example, in a given subject about 83.40% of authors out of One Hundred will contribute one article each, 10.29% will contribute two articles each, 3.99% will contribute 3 articles each, and so on. Lotka's Law is mathematically expressed as:

$$Y_x = C/X^n$$

Where, Y is the number of authors credited with X (1, 2, 3, 4, 5, 6, 7,) papers C is the number of authors contributing one paper, and n is the rate

$$X^n * Y_x = C \text{ (Where } X = 1)$$

i.e., $1 * 397 = C$, (C = 397, number of authors contributing one paper)

$$\text{When } X=2 \quad 2^n * 49 = C \text{ (C = 8.10)}$$

$$2^n = 397/49 = 8.10 \text{ (by applying log) } n \log (2) = \log (8.10)$$

$$n = \log (8.10) / \log (2) \text{ (Where } \log (8.10) = 0.103$$

$$\& \log (2) = 0.04)$$

$$\text{Therefore } n = 0.8005$$

Where, Y is the number of authors credited with X (1, 2, 3, 4, 5, 6, 7) papers, C is the number of authors contributing one paper. In the present study, 476 authors have contributed 397 articles published during the publication phase of 1972-2024. There are 397 (83.40%) authors contributing only one, 49 (10.29%) authors contributing two, 19 (3.99%) authors contributing 3 times, 5 (1.05%) authors contributing 4 times and so on. It is clear from Table 5 and Figure 5 that the observed and expected authors are not equal and the difference is also there for $n=0.8005$. Hence, the author's productivity pattern in the Siddha Medicine domain does not comply with Lotka's Law for $n=0.8005$.

Table -5

Lotka's Law of Scientific Productivity						
Number of Articles	Several Author observed	Proportion of Authors	Observed %	n=0.8005 n=2 (est)	No. of Authors expected	Expected %
X	Y		%		Standard	%
1	397	0.834	83.4	397	314.86	66.15
2	49	0.103	10.29	99.25	78.71	13.12
3	19	0.04	3.99	44.11	34.98	5.83
4	5	0.011	1.05	24.81	19.68	3.28
5	1	0.002	0.21	15.88	12.59	2.1
6	4	0.008	0.84	11.03	8.75	1.46
7	1	0.002	0.21	8.1	6.43	1.07
	476		100	600.1834	476	

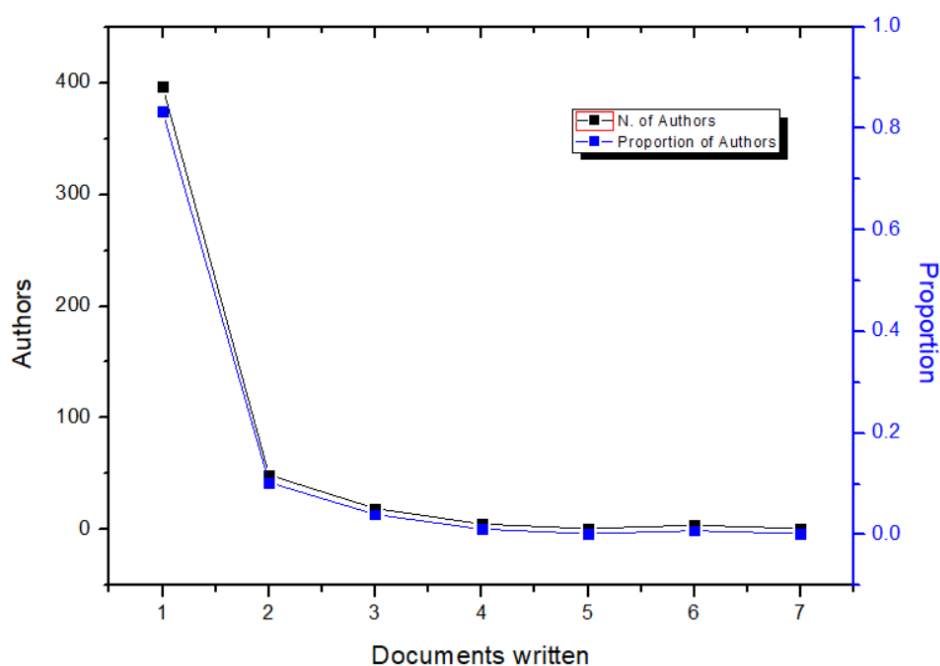


Figure-5 Author Productivity through Lotka's Law

Document Types

Table 6 and Figure 6 show the type of documents published on Siddha medicine and it reveals that the majority(72.66%) of the literature on Siddha medicine is published in the form of journal articles, followed by 9(7.03%) documents are in the form of historical articles. Other types, such as case reports, reviews, and biographies, receive less than 5% representation. Commentaries, comparison studies, editorials, assessment studies, published errata, and retractions individually account for only 0.78% of the dataset. Literature on Siddha medicine is not yet published in the form of books.

Table-6 Document Types

Type	Numbers	%
Biography	4	3.13%
Case Reports	7	5.47%
Clinical Trial & Letter	3	2.34%
Comment	1	0.78%
Comparative Study	1	0.78%
Editorial	1	0.78%
Evaluation Study	1	0.78%
Historical Article	9	7.03%
Journal Article	93	72.66%
Published Erratum	1	0.78%
Retraction of Publication	1	0.78%
Review	6	4.69%
Total	128	100.00%

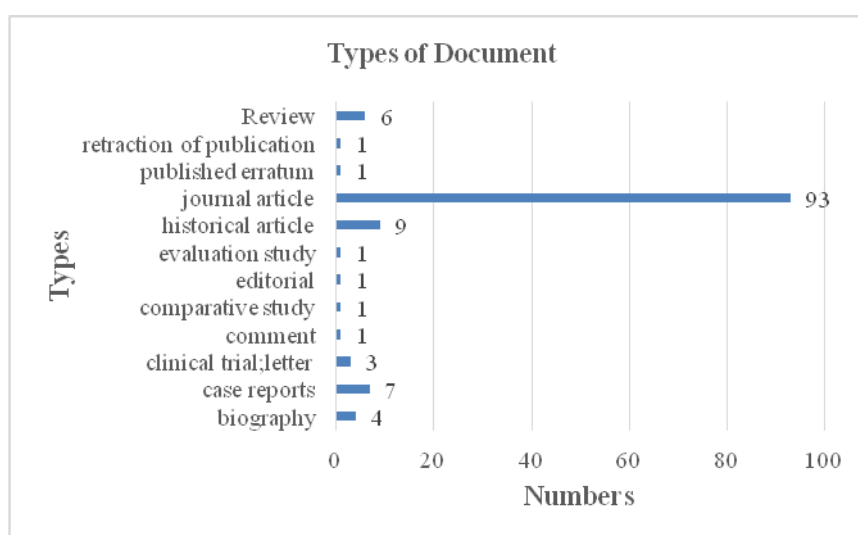


Figure-6

5.7 Channels of Scientific Communication

Table 7 and Figure 7 illustrate the channels of scientific communications used in the Siddha medicine domain from 1972 to 2024. The Journal of Ayurveda and Integrative Medicine holds the highest number of publications i.e. 17 (13.28%), followed by the Ancient Science of Life 12 (9.38%), Journal of Ethnopharmacology 11 (8.59%), Bulletin of the Institute of History of Medicine (Hyderabad) (4.69%) and Bulletin of the Indian Institute of history of medicine (Hyderabad) (3.91%). 42 journals are contributing 1 article each from 1972 to 2024 in the Siddha domain literature. The top three journals collectively contribute to about 32.81% of the total cumulative frequency.

Table- 7 Channels of Scientific Communication

Sl. No	Channels	Rank	Freq	%	cumFreq
1	JOURNAL OF AYURVEDA AND INTEGRATIVE MEDICINE	1	17	13.28%	17
2	ANCIENT SCIENCE OF LIFE	2	12	9.38%	29
3	JOURNAL OF ETHNOPHARMACOLOGY	3	11	8.59%	40
4	BULLETIN OF THE INSTITUTE OF HISTORY OF MEDICINE (HYDERABAD)	4	6	4.69%	46
5	BULLETIN OF THE INDIAN INSTITUTE OF HISTORY OF MEDICINE (HYDERABAD)	5	5	3.91%	51
6	CHEMICO-BIOLOGICAL INTERACTIONS	6	4	3.13%	55
7	JOURNAL OF COMPLEMENTARY & INTEGRATIVE MEDICINE	7	4	3.13%	59
8	TRIALS	8	4	3.13%	63
9	JOURNAL OF FAMILY MEDICINE AND PRIMARY CARE	9	3	2.34%	66
10	JOURNAL OF TRADITIONAL AND COMPLEMENTARY MEDICINE	10	3	2.34%	69
11	THE INTERNATIONAL JOURNAL OF HEALTH PLANNING AND MANAGEMENT	11	3	2.34%	72
12	APPLIED BIOCHEMISTRY AND BIOTECHNOLOGY	12	2	1.56%	74
13	AYU	13	2	1.56%	76
14	CLINICS IN DERMATOLOGY	14	2	1.56%	78
15	EXPLORE (NEW YORK, N.Y.)	15	2	1.56%	80
16	HUMAN & EXPERIMENTAL TOXICOLOGY	16	2	1.56%	82
17	PHARMACOGNOSY MAGAZINE	17	2	1.56%	84
18	THE JOURNAL OF THE ASSOCIATION OF PHYSICIANS OF INDIA	18	2	1.56%	86
19	ADVANCES IN PHARMACOLOGICAL SCIENCES	19	1	0.78%	87
20	ADVANCES IN PROTEIN CHEMISTRY AND STRUCTURAL BIOLOGY	20	1	0.78%	88
21	AFRICAN JOURNAL OF TRADITIONAL, COMPLEMENTARY, AND ALTERNATIVE MEDICINES: AJTCAM	21	1	0.78%	89
22	ANNALS OF INDIAN ACADEMY OF NEUROLOGY	22	1	0.78%	90
23	AVICENNA JOURNAL OF MEDICAL	23	1	0.78%	91

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	BIOTECHNOLOGY				
24	BIOCATALYSIS AND AGRICULTURAL BIOTECHNOLOGY	24	1	0.78%	92
25	BIOINFORMATICIAN	25	1	0.78%	93
26	BIOMEDICINE & PHARMACOTHERAPY = BIOMEDECINE & PHARMACOTHERAPIE	26	1	0.78%	94
27	BMC COMPLEMENTARY AND ALTERNATIVE MEDICINE	27	1	0.78%	95
28	BMJ (CLINICAL RESEARCH ED.)	28	1	0.78%	96
29	BMJ CASE REPORTS	29	1	0.78%	97
30	BURNS: JOURNAL OF THE INTERNATIONAL SOCIETY FOR BURN INJURIES	30	1	0.78%	98
31	CARDIOVASCULAR RESEARCH	31	1	0.78%	99
32	CLINICAL CHEMISTRY	32	1	0.78%	100
33	CUREUS	33	1	0.78%	101
34	EVIDENCE-BASED COMPLEMENTARY AND ALTERNATIVE MEDICINE: ECAM	34	1	0.78%	102
35	EXPERIMENTAL BIOLOGY AND MEDICINE (MAYWOOD, N.J.)	35	1	0.78%	103
36	FRONTIERS IN BIOENGINEERING AND BIOTECHNOLOGY	36	1	0.78%	104
37	FRONTIERS IN PHARMACOLOGY	37	1	0.78%	105
38	GEOGRAPHIA MEDICA	38	1	0.78%	106
39	INDIAN JOURNAL OF PHYSIOLOGY AND PHARMACOLOGY	39	1	0.78%	107
40	INDIAN JOURNAL OF THE HISTORY OF MEDICINE	40	1	0.78%	108
41	INTERNATIONAL JOURNAL OF AYURVEDA RESEARCH	41	1	0.78%	109
42	INTERNATIONAL SCHOLARLY RESEARCH NOTICES	42	1	0.78%	110
43	JOURNAL OF BIOMOLECULAR STRUCTURE & DYNAMICS	43	1	0.78%	111
44	JOURNAL OF ETHNOBIOLOGY AND ETHNOMEDICINE	44	1	0.78%	112
45	JOURNAL OF MEDICAL ENGINEERING & TECHNOLOGY	45	1	0.78%	113
46	JOURNAL OF PEDIATRIC ENDOCRINOLOGY & METABOLISM: JPEM	46	1	0.78%	114

47	LANCET (LONDON, ENGLAND)	47	1	0.78%	115
48	MEDICAL HISTORY	48	1	0.78%	116
49	NUCLEAR PHYSICS. A	49	1	0.78%	117
50	PATHOGENS (BASEL, SWITZERLAND)	50	1	0.78%	118
51	PHARMACEUTICAL BIOLOGY	51	1	0.78%	119
52	PHARMACEUTICAL NANOTECHNOLOGY	52	1	0.78%	120
53	PHARMACOGNOSY RESEARCH	53	1	0.78%	121
54	PLANTA	54	1	0.78%	122
55	PSYCHOLOGICAL REPORTS	55	1	0.78%	123
56	SAUDI JOURNAL OF BIOLOGICAL SCIENCES	56	1	0.78%	124
57	SOCIAL WORK IN HEALTH CARE	57	1	0.78%	125
58	THE INDIAN JOURNAL OF MEDICAL RESEARCH	58	1	0.78%	126
59	THE YALE JOURNAL OF BIOLOGY AND MEDICINE	59	1	0.78%	127
60	VIRUSDISEASE	60	1	0.78%	128
Total			128	100.00%	

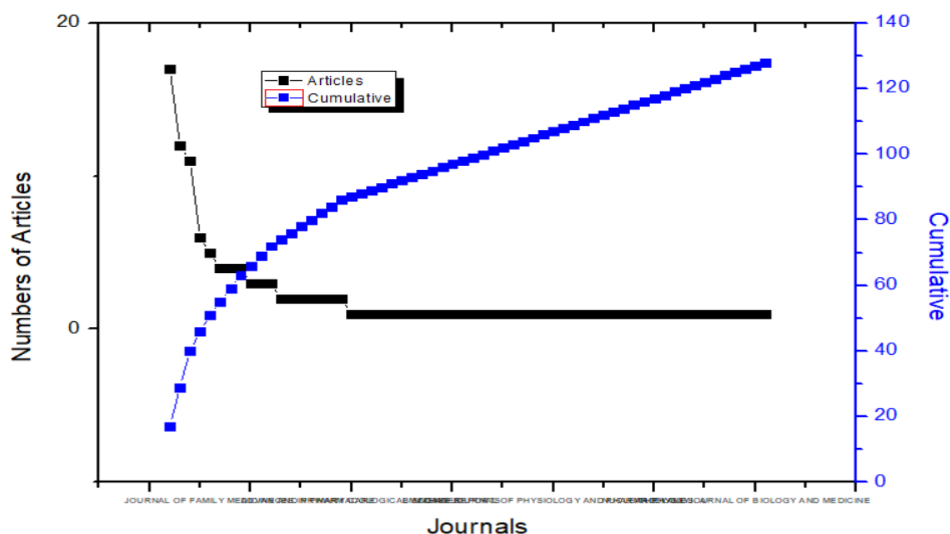


Figure- 7 Channels of Scientific Communication

The theme of core journals is taken from Bradford’s Law of Scattering, which was formulated by Samuel Clement Bradford in 1934 (Sudhier, 2010). Bradford’s law is one of the several statistical explanations about how scientific work is scattered or distributed in journals. If a journal is ranked by the number of articles, it includes on a given topic it can be divided into a central nucleus of the most important journals and a series of zones each containing the same number of articles as the nucleus.

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Table 8 shows the dataset of 60 journals has been found in the nucleus zone and the average Bradford's multiplier is $n=4.57$. Therefore, the average number of journals in the 3 zones is 4:16:40. Since the % of error (1.933) is high the data set fit well Bradford's law.

Table - 8

Distribution of papers and journals according to zones			
Zones	Journals	Articles	Bradford Multiplier
1	4	46	4.577
2	16	42	
3	40	40	
	60	128	

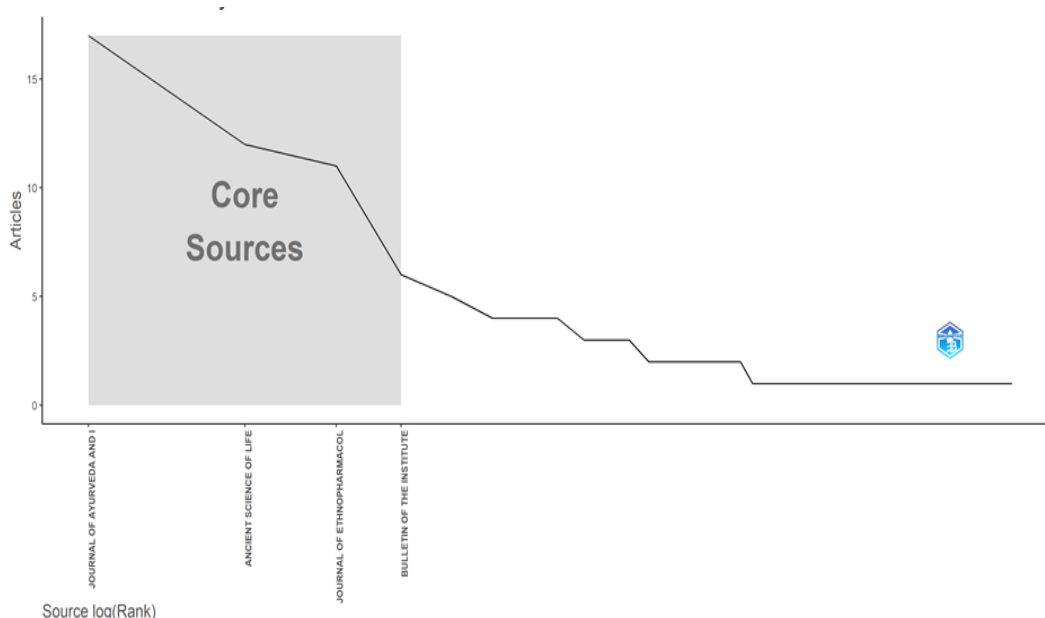


Figure-8 Core Sources & Bradford's Law

Table 9 and Figure 9 illustrate the country-wise publication in Siddha medicine literature. It found that India is the largest contributor, contributing 87.38% of the total literature. The United States ranks second, with a significantly lower percentage of 5.84%. Saudi Arabia, Italy, and the United Kingdom provide minor contributions ranging from 1.17% to 2.34%. Malaysia, Sri Lanka, and a few others have made significant contributions. 48 contributions have been marked as "Unknown," which means they may require further investigation or clarification.

Table-9

Authors Country-Wise Contribution to Siddha Medicine Literature 1972-2024		
Country	Freq	%
India	374	87.38%

USA	25	5.84%
Saudi Arabia	10	2.34%
Italy	5	1.17%
UK	5	1.17%
Malaysia	3	0.70%
Sri Lanka	2	0.47%
Belgium	1	0.23%
Brazil	1	0.23%
Canada	1	0.23%
South Africa	1	0.23%
Unknown	48	
Total	476	

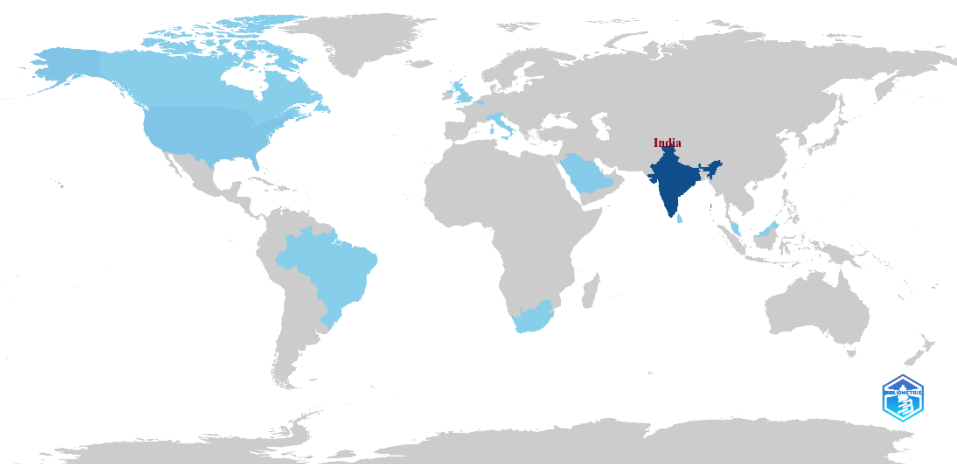


Figure-9 Authors Country-Wise Contribution in Siddha Medicine Literature 1972-2024

FINDINGS

2022-2024 is the period with the highest growth rate (27.34%) followed by 2012-2016 with 25 (19.53%) and the least i.e. 1(0.78%) publication was found during the period from 1976-1981. The average growth rate of Siddha literature per year is 16.67%. The maximum number of publications (16.41%) are triple-authored followed by 15.63% and 14.06% of publications that are four-authored and single-authored respectively. The Thaavaram domain has the highest number (41) of publications followed by the History of Siddha, Clinical Trials, and Miscellaneous work domain with 37, the Thaathu domain with 32 and Jangamam domain with 18 publications. Sathiyarajeswaran P. has published the highest number i.e. 7(5.47%) of publications, followed by Anbarasi C, Ignacimuthu S, Mutheeswaran S and Pandikumar P. has published 6 each, accounting for 4.69% of the total number of publications. Most (393) of the authors have published one each publication. The majority (72.66%) of the literature on Siddha medicine is published in the form of journal articles, followed by 9(7.03%) documents in the form of historical articles. Literature on Siddha medicine is not yet published in the form of books. The Journal of Ayurveda and Integrative Medicine holds the highest number of publications i.e. 17 (13.28%), followed by the Ancient Science of

Life (9.38%) and Journal of Ethnopharmacology (1s are contributing 1 article each from 1972 to 2024 in the Siddha domain literature. The top three journals collectively contribute to about 31.25% of the total cumulative frequency. India is the largest contributor, contributing 87.38% of the total literature. The United States ranks second, with a significantly lower percentage of 5.84%. Saudi Arabia, Italy and the United Kingdom provide minor contributions ranging from 1.17% to 2.34%.

CONCLUSION

The findings indicate a development in research activity and interest in the literature on Siddha medicine, which has been especially noticeable in recent years. Authors frequently work with one another in varying degrees. There is a diverse range of publications that contribute to the field; however, some topics and document formats receive more attention than others. The majority of Indian contributions emphasise the significance of Siddha medicine in that country. However, more analysis of publication routes, document types, and collaboration patterns may provide a more in-depth insight into how the field of Siddha medicine research is evolving.

The Scientometrics analysis reveals that Siddha's medical literature is extensive and covers a wide array of topics within the traditional medicine system. It underscores the importance of Siddha medicine in historical and contemporary healthcare, while also pointing to the necessity for further research and validation to integrate traditional knowledge with modern medical practices.

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