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Jagannathan Ramakrishnan Dr

The Tamil Nadu Dr. M.G.R. Medical University, Chennai, India, dhanaram@yahoo.com

M Meena Dr

The Tamil Nadu Dr. M.G.R. Medical University, Chennai, India, meena.m@tnmgrmu.ac.in

Kotti Thavamani Dr

The Tamil Nadu Dr. M.G.R. Medical University, Chennai, India, kottithavam@gmail.com

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LITERATURE IN THE FIELD OF SPINAL CORD INJURY: AN ANALYSIS

Dr. J. Ramakrishnan*

Dr. M. Meena**

Dr. K. Thavamani***

*Deputy Librarian and **S.G. Assistant Librarian, ***S.G. Library Assistant, Regional Medical Library, The Tamil Nadu Dr. M.G.R. Medical University, Guindy, Chennai – 600 032.

ABSTRACT: Presents an analysis of the literature in the field of Spinal Cord Injury as indexed the MEDLINE database in the Pubmed for the period 2008 to the 2017. It is noticed that the total of 28303 records on the literature of Spinal Cord Injury is covered. It is also noticed that the maximum number of records was published during year 2017. It was observed that the Journal Article consists of 41.73% and other publication types with different percentages. English language forming 95.07% of the total and other languages follows with minimum records. The United States has contributed the highest number of records in the study. 29 primary journals grouped in zone-1 published 3941 journal articles, the second zone comprises of 238 journals published 4031 journal articles and 1790 journals grouped in the third zone published 3840 journal articles. Of the 29 Journals in zone-1, twelve journals are published in the United States and followed by other countries. In zone-1 & 2; out of 267 journals, 37.45% frequently cited journals are the United States and India contributed eight journals.

Keywords: Spinal Cord Injury, Scientometrics, Bradford's Law and Primary journals

INTRODUCTION

Scientometric analysis of literature in various disciplines has been carried out by using primary journals or secondary sources to examine the quantitative aspects of literature growth in a particular field of knowledge. Quantitative measurement of publications, citations and other parameters have been largely applied and used in evaluating scientific research. On review of the literature, it was found that no Scientometrics study has been conducted either at the macro or micro level on the literature in the field of “Spinal Cord Injury”. Hence it is proposed to study quantitatively the literature published on Spinal Cord Injury by using the bibliographic database, namely MEDLINE which covered in the Pubmed.

REVIEW OF LITERATURE

There are a number of studies about scientometrics and also several studies on mapping have analyzed allied health journal citations to determine lists of primary journals in their fields.¹⁻¹² The first author of this study used these types of studies and methodology with different co-authors and various fields of medicine.¹³⁻²⁰

SPINAL CORD INJURY

A spinal cord injury (SCI) is damage to the spinal cord that causes temporary or permanent changes in its function. Symptoms may include loss of muscle function, sensation, or autonomic function in the parts of the body served by the spinal cord below the level of the injury.²¹

AIM OF THE STUDY

The aim of this study is:

1. To study the Number of literature published in the field of Spinal Cord Injury.

2. To analyse the publication types of literature published.
3. To examine the languages covered in the literature.
4. To find out the country of literature published.
5. To identify the primary journals and their countries.

METHODOLOGY

The records covered during the year 2008 to 2017 in the field of Spinal Cord Injury in the MEDLINE database, which were covered in the PubMed (www.pubmed.com) was searched and bibliographic details were collected. The retrieved records were converted into FoxPro and loaded in SPSS. The keyword ‘Spinal Cord Injury’ has used for extracting the number of records available in the above-said database. The data, collected from the source database has analysed by using the bibliometric technique such as Bradford’s Law of Scattering to find the primary journals in the field of Spinal Cord Injury .²²

QUANTUM OF SPINAL CORD INJURY RESEARCH PRODUCTIVITY

The research output of literature of Spinal Cord Injury in the database is presented in Table-1 and noticed that a total of 28303 records in the literature of Spinal Cord Injury. It is also noticed that the maximum number of records (3504) was published during the year 2017, followed by 3287 in the year 2016, 3199 in the year 2015 and 3090 in the year 2014. On the whole, it is observed that there is a gradual increase in Spinal Cord Injury research productivity year after year. (Fig.1)

Table-1: Number of Literature published in Spinal Cord Injury

Year	Frequency	%
2008	2199	7.8
2009	2362	8.3
2010	2403	8.5
2011	2479	8.8
2012	2842	10

2013	2938	10.4
2014	3090	10.9
2015	3199	11.3
2016	3287	11.6
2017	3504	12.4
Total	28303	100



Figure-1: Number of Literature published in ‘Spinal Cord Injury’ by Year

PUBLICATION TYPES DISTRIBUTION OF SPINAL CORD INJURY RESEARCH

Table-2 reveals the distribution of the ‘Spinal Cord Injury’ research output according to various publication types of the MEDLINE database. It was found that Journal Article (41.73%), Research Support, Non-U.S. Gov't (29.74%), Review (13.97%), Research Support, U.S. Gov't, Non-P.H.S. (4.19%), Research Support, N.I.H., Extramural (3.10%), Letter (1.79%), Editorial (0.92%), Randomized Controlled Trial (0.66%), Validation Studies (0.64%), Multicenter Study (0.59%), Introductory Journal Article (0.36%), Comment (0.34%), Observational Study (0.32%), Research Support, U.S. Gov't, P.H.S. (0.31), Video-Audio Media

(0.26%), News (0.23%), Published Erratum (0.17%), Practice Guideline (0.11%), Portraits (0.08%), Meta-Analysis (0.07%), Retracted Publication (0.07%), Book Chapter (0.05%), Retraction of Publication (0.04%), Book (0.03%), Congresses (0.03%), Interview (0.03%) and other publication types with minimum percentages. (Fig.2)

Table-2: Publication Types of Spinal Cord Injury Research

Pub. Type	No. of records	%
Journal Article	11812	41.73
Research Support, Non-U.S. Gov't	8416	29.74
Review	3954	13.97
Research Support, U.S. Gov't, Non-P.H.S.	1187	4.19
Research Support, N.I.H., Extramural	878	3.10
Letter	508	1.79
Editorial	259	0.92
Randomized Controlled Trial	188	0.66
Validation Studies	181	0.64
Multicenter Study	168	0.59
Introductory Journal Article	101	0.36
Comment	95	0.34
Observational Study	91	0.32
Research Support, U.S. Gov't, P.H.S.	88	0.31
Video-Audio Media	75	0.26
News	66	0.23
Published Erratum	48	0.17
Practice Guideline	30	0.11
Portraits	23	0.08
Meta-Analysis	20	0.07
Retracted Publication	20	0.07
Book Chapter	13	0.05
Retraction of Publication	12	0.04
Book	9	0.03
Congresses	8	0.03
Interview	8	0.03
Other Publication types	45	0.13
Total	28303	100.00

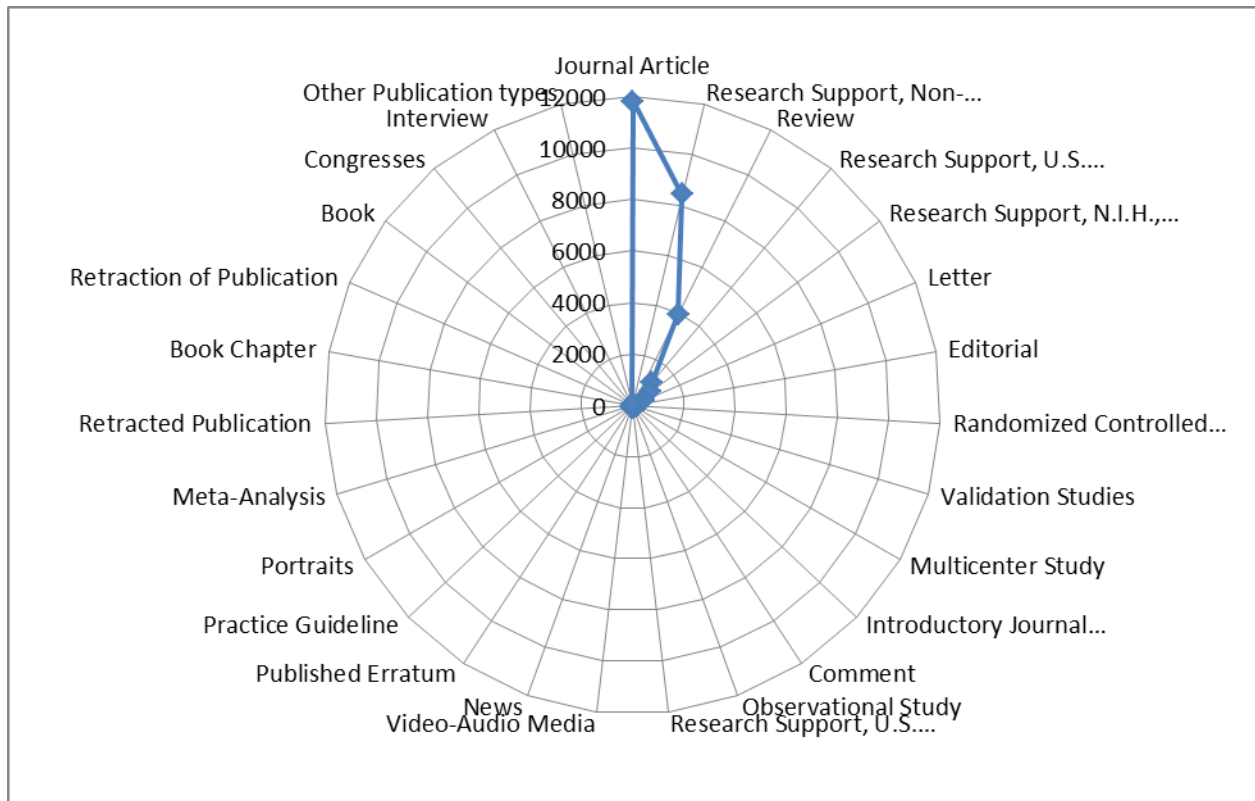


Figure-2: Publication Types of Spinal Cord Injury Research

DISTRIBUTION OF LANGUAGES IN THE LITERATURE OF SPINAL CORD INJURY

Table-3 shows the distribution of citations according to language. The table shows that out of a total of 28303 records, 26907 of them were in English language forming 95.07% of the total, followed by Chinese, French, Spanish, German, Japanese, Russian, Portuguese, Polish, Norwegian, Czech, Swedish, Dutch and other languages follow with minimum records. (Fig.3)

Table-3: Distribution of Languages in the literature of Spinal Cord Injury

Language	No. of records	%
English	26907	95.07
Chinese	511	1.81
French	176	0.62
Spanish	165	0.58
German	139	0.49
Japanese	126	0.45

Russian	98	0.35
Portuguese	39	0.14
Polish	27	0.10
Norwegian	21	0.07
Czech	15	0.05
Swedish	13	0.05
Dutch	10	0.04
Hungarian	9	0.03
Italian	9	0.03
Danish	7	0.02
Hebrew	7	0.02
Serbian	5	0.02
Turkish	5	0.02
Finnish	4	0.009
Croatian	3	0.008
Icelandic	2	0.007
Ukrainian	2	0.007
Bosnian	1	0.003
Korean	1	0.003
Slovak	1	0.003
Total	28303	100.00

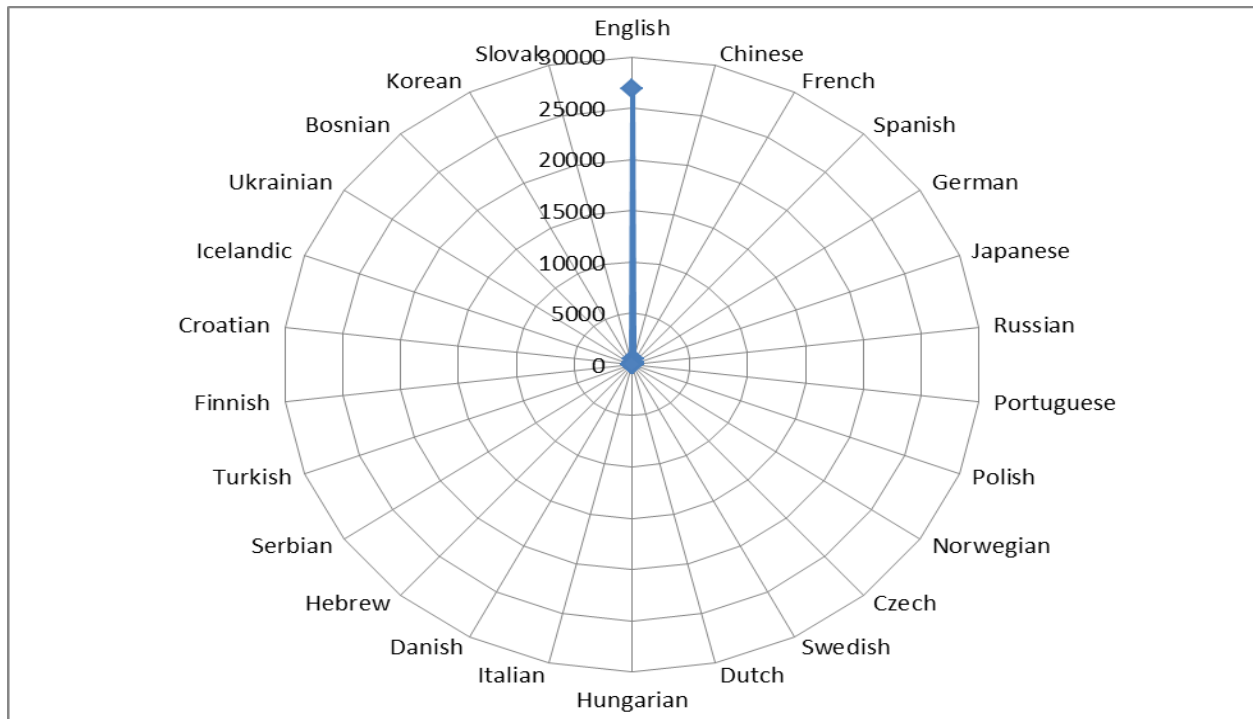


Figure-3: Distribution of Languages in the literature of Spinal Cord Injury

DISTRIBUTION OF RECORDS BY COUNTRY

Table-4 shows the country-wise distribution of ‘Spinal Cord Injury’ records. The United States has contributed the highest number of records in the study. Next major contribution belongs to England, the Netherlands, Germany, China, Switzerland, India, Ireland, Japan, France, Korea (South), Italy, Sweden, Greece, Scotland, Iran, Australia, Spain, Brazil, United Arab Emirates, Poland, Austria, Turkey, New Zealand, Canada, Russia (Federation), Singapore, Denmark, Egypt, Saudi Arabia, China (Republic : 1949-), Czech Republic, Belgium, Pakistan, Norway, Mexico, Uganda, Romania, Croatia, Thailand, Hungary, Portugal, South Africa, Boca Raton (FL), Israel, Nigeria, Serbia, Bosnia and Herzegovina, Nepal, Argentina, Oman, Finland, Slovakia and other countries with minimum records follows. India records in the 7th position among the countries. (Fig.4)

Table 4 Distribution of records by Country

Country	Frequency	Percent
United States	12791	45.19
England	6557	23.17
Netherlands	1765	6.24
Germany	1238	4.37
China	673	2.38
Switzerland	652	2.30
India	602	2.13
Ireland	381	1.35
Japan	381	1.35
France	331	1.17
Korea (South)	269	0.95
Italy	256	0.90
Sweden	177	0.63
Greece	169	0.60
Scotland	169	0.60
Iran	156	0.55
Australia	154	0.54
Spain	152	0.54

Brazil	150	0.53
United Arab Emirates	129	0.46
Poland	116	0.41
Austria	115	0.41
Turkey	108	0.38
New Zealand	101	0.36
Canada	96	0.34
Russia (Federation)	94	0.33
Singapore	53	0.19
Denmark	34	0.12
Egypt	31	0.11
Saudi Arabia	31	0.11
China (Republic : 1949-)	30	0.11
Czech Republic	29	0.10
Belgium	27	0.10
Pakistan	26	0.09
Norway	25	0.09
Mexico	24	0.08
Uganda	22	0.08
Romania	15	0.05
Croatia	12	0.04
Thailand	12	0.04
Hungary	11	0.04
Portugal	11	0.04
South Africa	11	0.04
Boca Raton (FL)	9	0.03
Israel	9	0.03
Nigeria	8	0.03
Serbia	8	0.03
Bosnia and Herzegovina	7	0.02
Nepal	7	0.02
Argentina	6	0.02
Oman	6	0.02
Finland	5	0.02
Slovakia	5	0.02
Other countries	47	0.15
Total	28303	100.00

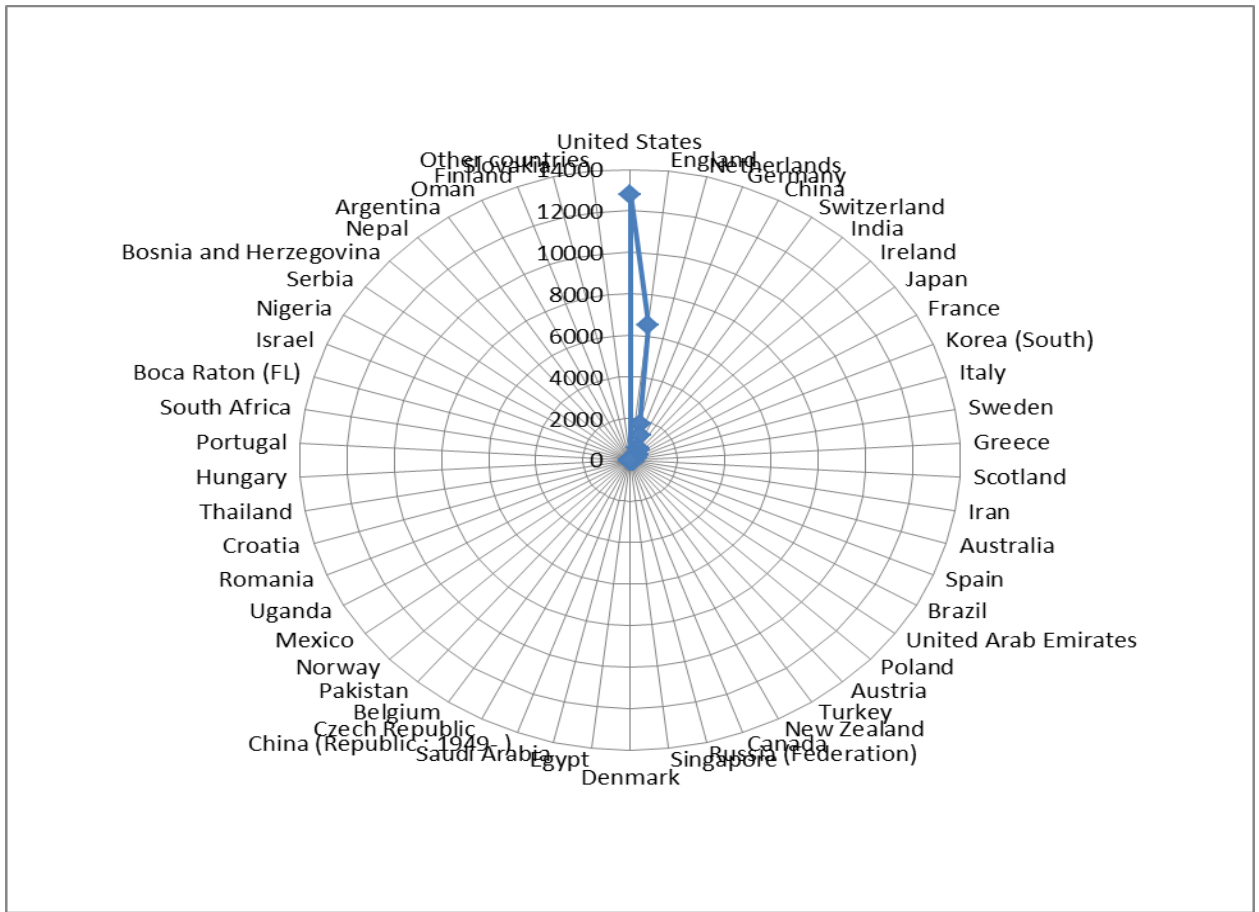


Figure-4: Distribution of records by Country

DISTRIBUTION OF JOURNALS IN SPINAL CORD INJURY

As per the Bradford Law, the journals were grouped into three zones producing a similar number of articles and also 11812 journal articles were taken for this study. The distribution of journal by zone wise is given in the Table-5, it shows that 29 primary journals grouped in zone-1 published 3941 journal articles accounting for one-third of the total output. Similarly, the second zone comprises of 238 journals published 4031 journal articles and 1790 journals grouped in the third zone published 3840 journal articles. Zone-1 and Zone-2 journals were identified as primary journals in the field of Spinal Cord Injury. (Figure-5)

Table-5: Distribution by Zone of cited journals and journal articles in Spinal Cord Injury

Zone	No. of Journals		No. of journal articles		Cumulative No. of journal articles	
	No.	(%)	No.	(%)	No.	(%)
Zone 1	29	1.41	3941	33.36	3941	33.36
Zone 2	238	11.57	4031	34.13	7972	67.49
Zone 3	1790	87.02	3840	32.51	11812	100.00
Total	2051	100.00	11812	100.00		

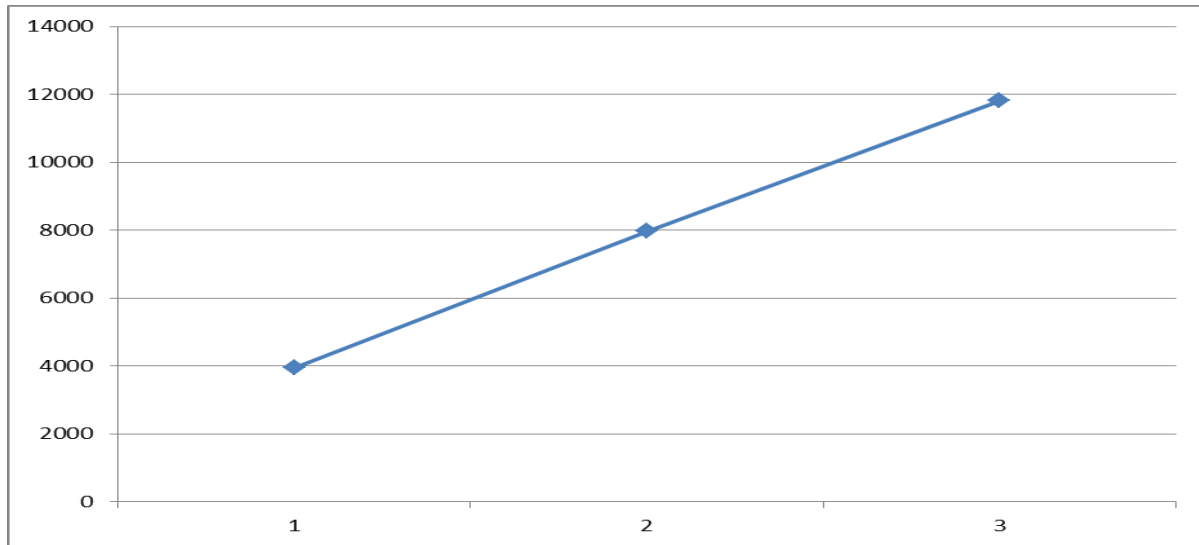


Figure-5: Distributions of Journals by Zones

COUNTRY WISE COVERAGE OF ZONE-1 JOURNALS

Table-6 shows that the most frequently cited journals are United States titles with 41.37%. Of the 29 Journals in zone-1, twelve journals are published in the United States and followed by England (5), China (2), Austria (1), Germany (1), Greece (1), India (1), Ireland (1), Japan (1), Korea (South) (1), Scotland (1), Sweden (1) and Turkey (1). (Fig.-6)

Table-6: Country-wise coverage of Zone-1 journals in Spinal Cord Injury

S. No.	Country	Frequency	%	Cumulative %
1.	United States	12	41.37	41.37

2.	England	5	17.23	58.6
3.	China	2	6.90	65.5
4.	Austria	1	3.45	68.95
5.	Germany	1	3.45	72.4
6.	Greece	1	3.45	75.85
7.	India	1	3.45	79.3
8.	Ireland	1	3.45	82.75
9.	Japan	1	3.45	86.2
10.	Korea (South)	1	3.45	89.65
11.	Scotland	1	3.45	93.1
12.	Sweden	1	3.45	96.55
13.	Turkey	1	3.45	100
Total		29	100.00	

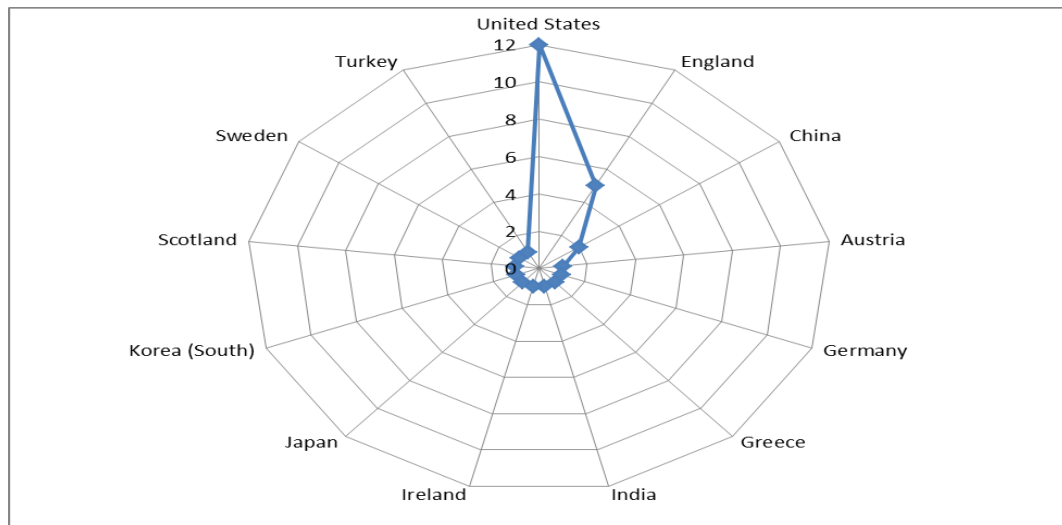


Figure-6: Country-wise coverage of Zone-1 journals in Spinal Cord Injury

COUNTRY WISE COVERAGE OF ZONE-2 JOURNALS

Table-7 shows that in zone-2; out of 238 journals, 88 frequently cited journals are the United States and followed by the countries, i.e. England (39), Netherlands (21), Germany (13), China (10), Switzerland (9), France (7), India (7), Japan (6), Korea (South) (6), Italy (5), Brazil (4), Iran (3), Belgium (2), Greece (2), New Zealand (2), Pakistan (2), Poland (2), Spain (2), Australia (1), Czech Republic (1), Ireland (1), Russia (Federation) (1), Saudi Arabia (1), Sweden (1), Turkey (1) and Uganda (1). (Fig.-7)

Table-7: Country-wise coverage of Zone-2 journals in Spinal Cord Injury

S. No.	Country	Frequency	%	Cumulative %
1.	United States	88	36.98	36.98
2.	England	39	16.4	53.38
3.	Netherlands	21	8.82	62.2
4.	Germany	13	5.46	67.66
5.	China	10	4.20	71.86
6.	Switzerland	9	3.78	75.64
7.	France	7	2.94	78.58
8.	India	7	2.94	81.52
9.	Japan	6	2.52	84.04
10.	Korea (South)	6	2.52	86.56
11.	Italy	5	2.10	88.66
12.	Brazil	4	1.68	90.34
13.	Iran	3	1.26	91.6
14.	Belgium	2	0.84	92.44
15.	Greece	2	0.84	93.28
16.	New Zealand	2	0.84	94.12
17.	Pakistan	2	0.84	94.96
18.	Poland	2	0.84	95.8
19.	Spain	2	0.84	96.64
20.	Australia	1	0.42	97.06
21.	Czech Republic	1	0.42	97.48
22.	Ireland	1	0.42	97.9
23.	Russia (Federation)	1	0.42	98.32
24.	Saudi Arabia	1	0.42	98.74
25.	Sweden	1	0.42	99.16
26.	Turkey	1	0.42	99.58
27.	Uganda	1	0.42	100
Total		238	100.00	

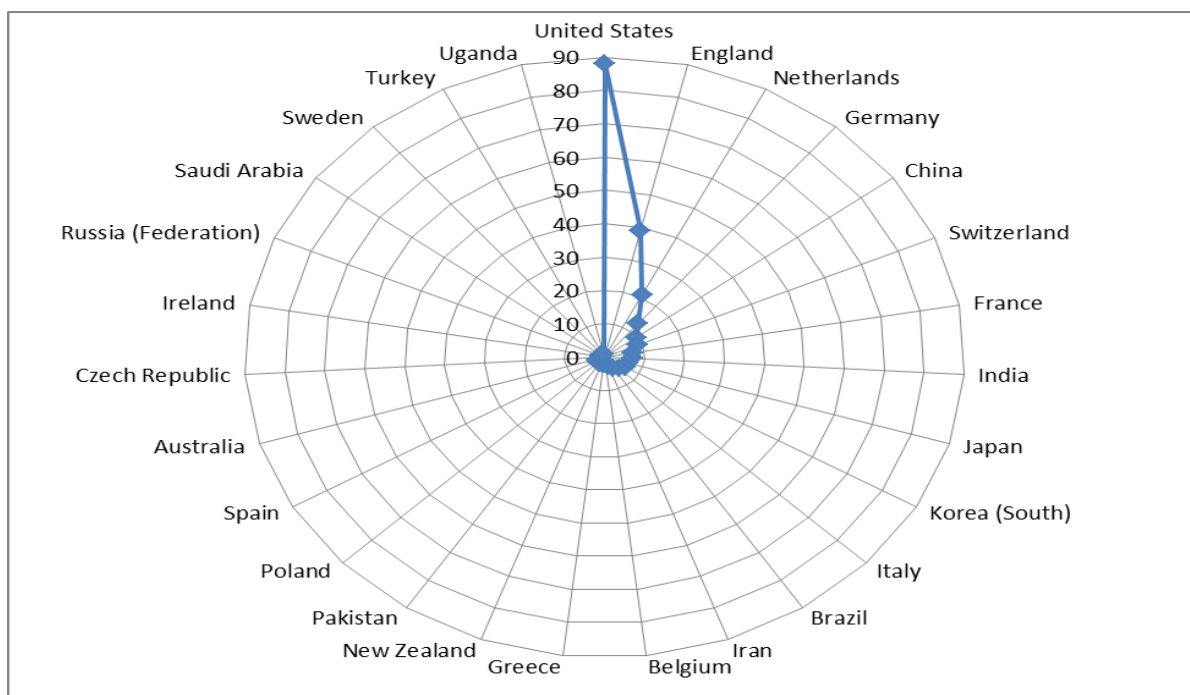


Figure-7: Country-wise coverage of Zone-2 journals in Spinal Cord Injury

COUNTRY WISE COVERAGE OF ZONE-1 & 2 JOURNALS

Table-8 shows that in zone-1 & 2; out of 267 journals, 100 frequently cited journals are the United States, this is followed by the countries, i.e. England (44), Netherlands (21), Germany (14), China (12), Switzerland (9), India (8), France (7), Japan (7), Korea (South) (7), Italy (5), Brazil (4), Greece (3), Iran (3), Belgium (2), Ireland (2), New Zealand (2), Pakistan (2), Poland (2), Spain (2), Sweden (2), Turkey (2), Australia (1), Austria (1), Czech Republic (1), Russia (Federation) (1), Saudi Arabia (1), Scotland (1) and Uganda (1). (Fig.-8)

Table-8: Country-wise coverage of Zone1 & 2 journals in Spinal Cord Injury

S. No.	Country	Frequency	Percent	Cumulative %
1.	United States	100	37.46	37.46
2.	England	44	16.49	53.95
3.	Netherlands	21	7.88	61.83
4.	Germany	14	5.25	67.08
5.	China	12	4.49	71.57
6.	Switzerland	9	3.37	74.94
7.	India	8	3.00	77.94

8.	France	7	2.62	80.56
9.	Japan	7	2.62	83.18
10.	Korea (South)	7	2.62	85.8
11.	Italy	5	1.87	87.67
12.	Brazil	4	1.50	89.17
13.	Greece	3	1.12	90.29
14.	Iran	3	1.12	91.41
15.	Belgium	2	0.75	92.16
16.	Ireland	2	0.75	92.91
17.	New Zealand	2	0.75	93.66
18.	Pakistan	2	0.75	94.41
19.	Poland	2	0.75	95.16
20.	Spain	2	0.75	95.91
21.	Sweden	2	0.75	96.66
22.	Turkey	2	0.75	97.41
23.	Australia	1	0.37	97.78
24.	Austria	1	0.37	98.15
25.	Czech Republic	1	0.37	98.52
26.	Russia (Federation)	1	0.37	98.89
27.	Saudi Arabia	1	0.37	99.26
28.	Scotland	1	0.37	99.63
29.	Uganda	1	0.37	100
Total		267	100.00	



Figure-8: Country-wise coverage of Zone1 & 2 journals in Spinal Cord Injury

PRIMARY JOURNALS IN SPINAL CORD INJURY RESEARCH

Primary journals along with the country of origin in the field of Spinal Cord Injury literature is given in Table-9. England is dominating the first two ranks out of five ranks, the United States contributes to the third position, India contributes to the fourth position and German contributes to the fifth positions. The highly prime journals up to 5 ranks are as follows:

1. 'Spinal Cord' published in England with 715 contributions amounting to 6.05% of total contributions.
2. 'The Journal of Spinal Cord Injury Medicine' published in England with 288 contributions amounting to 2.44%.
3. 'Spine' published by the United States with 287 contributions amounting to 2.43%.
4. 'Neural Regeneration Research' published in India with 236 contributions amounting to 2%.
5. 'European Spine Journal' published in Germany with 230 contributions amounting to 1.95%.

Table-9: Primary Journals in Spinal Cord Injury Research

S.No.	Name of the Journal	No. of Records	%	Country of Publication
1.	Spinal Cord	715	6.05	England
2.	The Journal of Spinal Cord Medicine	288	2.44	England
3.	Spine	287	2.43	United States
4.	Neural Regeneration Research	236	2.00	India
5.	European Spine Journal	230	1.95	Germany
6.	Journal of Neurosurgery. Spine	204	1.73	United States
7.	Topics in Spinal Cord Injury Rehabilitation	193	1.63	United States
8.	Journal of Neurotrauma	183	1.55	United States
9.	The Spine Journal	151	1.28	United States
10.	World Neurosurgery	135	1.14	United States
11.	Journal of Clinical Neuroscience	112	0.95	Scotland

S.No.	Name of the Journal	No. of Records	%	Country of Publication
12.	Spinal Cord Series and Cases	111	0.94	England
13.	Plos One	87	0.74	United States
14.	American Journal of Physical Medicine & Rehabilitation	84	0.71	United States
15.	Zhongguo Xiu Fu Chong Jian Wai Ke Za Zhi = Zhongguo Xiufu Chongjian Waike Zazhi =	83	0.70	China
16.	Neurosurgery	75	0.63	United States
17.	Zhongguo Gu Shang = China Journal of Orthopaedics And Traumatology	72	0.61	China
18.	Annals of Rehabilitation Medicine	67	0.57	Korea (South)
19.	BMJ Case Reports	67	0.57	England
20.	PM & R : The Journal of Injury, Function, and Rehabilitation	67	0.57	United States
21.	Neuroscience Letters	65	0.55	Ireland
22.	Archives of Physical Medicine and Rehabilitation	59	0.50	United States
23.	Acta Neurochirurgica	56	0.47	Austria
24.	Journal of Rehabilitation Medicine	55	0.47	Sweden
25.	Turkish Neurosurgery	55	0.47	Turkey
26.	Disability and Rehabilitation	53	0.45	England
27.	Experimental and Therapeutic Medicine	52	0.44	Greece
28.	Neurologia Medico-Chirurgica	50	0.42	Japan
29.	Journal of Spinal Disorders & Techniques	49	0.41	United States
30.	Neuroscience	47	0.40	United States
31.	Surgical Neurology International	46	0.39	India
32.	British Journal of Neurosurgery	45	0.38	England
33.	Journal of Neurosurgery. Pediatrics	45	0.38	United States
34.	Injury	43	0.36	Netherlands
35.	Neurosurgical Focus	42	0.36	United States
36.	Scientific Reports	42	0.36	England
37.	The Journal of Urology	41	0.35	United States
38.	Frontiers in Neuroscience	40	0.34	Switzerland
39.	Journal of Korean Neurosurgical Society	40	0.34	Korea (South)
40.	Molecular Medicine Reports	40	0.34	Greece
41.	The Journal of Trauma	40	0.34	United States
42.	International Journal of Radiation Oncology, Biology, Physics	38	0.32	United States

S.No.	Name of the Journal	No. of Records	%	Country of Publication
43.	Neurochemical Research	37	0.31	United States
44.	Orthopedics	37	0.31	United States
45.	Neurourology and Urodynamics	36	0.30	United States
46.	Experimental Neurology	35	0.30	United States
47.	Journal of Neurophysiology	35	0.30	United States
48.	Brain Research	34	0.29	Netherlands
49.	Evidence Report/Technology Assessment	33	0.28	United States
50.	Frontiers in Neurology	33	0.28	Switzerland
51.	Journal of Vascular Surgery	33	0.28	United States
52.	Neurorehabilitation	33	0.28	Netherlands
53.	The Journal of Thoracic and Cardiovascular Surgery	33	0.28	United States
54.	Asian Spine Journal	32	0.27	Korea (South)
55.	Clinical Neurology and Neurosurgery	32	0.27	Netherlands
56.	Conference Proceedings: ... Annual International Conference of the IEEE	32	0.27	United States
57.	The Journal of Neuroscience	32	0.27	United States
58.	Child's Nervous System : CHNS	31	0.26	Germany
59.	Neurology	31	0.26	United States
60.	Pain Physician	31	0.26	United States
61.	Frontiers in Physiology	30	0.25	Switzerland
62.	Zhonghua Yi Xue Za Zhi	30	0.25	China
63.	Frontiers in Human Neuroscience	29	0.25	Switzerland
64.	Oncotarget	29	0.25	United States
65.	Clinical Spine Surgery	27	0.23	United States
66.	European Journal of Cardio-Thoracic Surgery	27	0.23	Germany
67.	Disability and Rehabilitation. Assistive Technology	26	0.22	England
68.	Journal of Physical Therapy Science	26	0.22	Japan
69.	Neuromodulation : Journal of the International Neuromodulation Society	26	0.22	United States
70.	European Journal of Physical and Rehabilitation Medicine	25	0.21	Italy
71.	Frontiers in Cellular Neuroscience	25	0.21	Switzerland
72.	The American Journal of Emergency Medicine	25	0.21	United States
73.	Biomed Research International	24	0.20	United States
74.	International Journal of Clinical and Experimental Medicine	24	0.20	United States

S.No.	Name of the Journal	No. of Records	%	Country of Publication
75.	Journal of Neuroinflammation	24	0.20	England
76.	Journal of the American Veterinary Medical Association	24	0.20	United States
77.	Journal of the Neurological Sciences	24	0.20	Netherlands
78.	Neurological Research	24	0.20	England
79.	Acta Medica Iranica	23	0.19	Iran
80.	Ajnr. American Journal of Neuroradiology	23	0.19	United States
81.	Medicine	23	0.19	United States
82.	Strahlentherapie Und Onkologie : Organ Der Deutschen Rontgengesellschaft ... [Et	23	0.19	Germany
83.	Neuro Endocrinology Letters	22	0.19	Sweden
84.	The Journal of Emergency Medicine	22	0.19	United States
85.	Annals of Physical and Rehabilitation Medicine	21	0.18	Netherlands
86.	Biomedicine & Pharmacotherapy = Biomedecine & Pharmacotherapie	21	0.18	France
87.	Global Spine Journal	21	0.18	England
88.	Journal of Medical Case Reports	21	0.18	England
89.	Journal of Pain Research	21	0.18	New Zealand
90.	Neurorehabilitation and Neural Repair	21	0.18	United States
91.	The Annals of Thoracic Surgery	21	0.18	Netherlands
92.	The Journal of Trauma and Acute Care Surgery	21	0.18	United States
93.	Annals of Vascular Surgery	20	0.17	Netherlands
94.	Journal of Neurosurgery	20	0.17	United States
95.	Neuroreport	20	0.17	England
96.	Surgical Neurology	20	0.17	United States
97.	The Journal of Bone and Joint Surgery. American Volume	20	0.17	United States
98.	Zhonghua Wai Ke Za Zhi [Chinese Journal of Surgery]	20	0.17	China
99.	Cell Transplantation	19	0.16	United States
100.	European Journal of Translational Myology	19	0.16	Italy
101.	International Journal of Rehabilitation Research.	19	0.16	England
102.	Rehabilitation Psychology	19	0.16	United States
103.	Ulusal Travma Ve Acil Cerrahi Dergisi = Turkish Journal of Trauma & Emergency	19	0.16	Turkey
104.	BJU International	18	0.15	England
105.	Brain Research Bulletin	18	0.15	United States
106.	Chinese Journal of Traumatology = Zhonghua Chuang	18	0.15	China

S.No.	Name of the Journal	No. of Records	%	Country of Publication
	Shang Za Zhi			
107.	European Journal of Pharmacology	18	0.15	Netherlands
108.	Frontiers in Molecular Neuroscience	18	0.15	Switzerland
109.	Journal of Orthopaedic Science : Official Journal of the Japanese Orthopaedic	18	0.15	Japan
110.	Journal of Orthopaedic Surgery (Hong Kong)	18	0.15	England
111.	Journal of Rehabilitation Research and Development	18	0.15	United States
112.	Veterinary Radiology & Ultrasound	18	0.15	England
113.	Archives of Orthopaedic and Trauma Surgery	17	0.14	Germany
114.	Indian Journal of Orthopaedics	17	0.14	India
115.	Neurocirugia (Asturias, Spain)	17	0.14	Spain
116.	Physical Therapy	17	0.14	United States
117.	Revista De Neurologia	17	0.14	Spain
118.	Anticancer Research	16	0.14	Greece
119.	Chinese Medical Journal	16	0.14	China
120.	Methods in Molecular Biology (Clifton, N.J.)	16	0.14	United States
121.	Orthopaedic Surgery	16	0.14	Australia
122.	Pain	16	0.14	United States
123.	Rinsho Shinkeigaku = Clinical Neurology	16	0.14	Japan
124.	Scandinavian Journal of Pain	16	0.14	Germany
125.	Zhurnal Voprosy Neirokhirurgii Imeni N. N. Burdenko	16	0.14	Russia (Federation)
126.	Arquivos De Neuro-Psiquiatria	15	0.13	Brazil
127.	Cases Journal	15	0.13	England
128.	Cellular and Molecular Neurobiology	15	0.13	United States
129.	IEEE ... International Conference on Rehabilitation Robotics : [Proceedings]	15	0.13	United States
130.	Journal of Neurological Surgery. Part A, Central European Neurosurgery	15	0.13	Germany
131.	Journal of Orthopaedic Surgery and Research	15	0.13	England
132.	Life Sciences	15	0.13	Netherlands
133.	Molecular Neurobiology	15	0.13	United States
134.	Neurobiology of Disease	15	0.13	United States
135.	Neuropharmacology	15	0.13	England
136.	Neurosciences (Riyadh, Saudi Arabia)	15	0.13	Saudi Arabia
137.	Stem Cells International	15	0.13	United States

S.No.	Name of the Journal	No. of Records	%	Country of Publication
138.	The Journal of Surgical Research	15	0.13	United States
139.	Brain, Behavior, and Immunity	14	0.12	Netherlands
140.	Clinical Orthopaedics and Related Research	14	0.12	United States
141.	European Review for Medical and Pharmacological Sciences	14	0.12	Italy
142.	Journal of Neural Engineering	14	0.12	England
143.	Neurological Sciences	14	0.12	Italy
144.	Pediatric Emergency Care	14	0.12	United States
145.	Progres En Urologie : Journal De l'Association Francaise D'urologie Et De La	14	0.12	France
146.	Skeletal Radiology	14	0.12	Germany
147.	The Journal of Bone and Joint Surgery. British Volume	14	0.12	England
148.	The Pan African Medical Journal	14	0.12	Uganda
149.	Urology	14	0.12	United States
150.	Veterinary Surgery : VS	14	0.12	United States
151.	Annals of Neurology	13	0.11	United States
152.	Cureus	13	0.11	United States
153.	Journal of Neurochemistry	13	0.11	England
154.	Journal of Neuroscience Research	13	0.11	United States
155.	Journal of Neurosurgical Sciences	13	0.11	Italy
156.	Muscle & Nerve	13	0.11	United States
157.	Neurologia I Neurochirurgia Polska	13	0.11	Poland
158.	The Journal of Pain : Official Journal of the American Pain Society	13	0.11	United States
159.	Acta Ortopedica Brasileira	12	0.10	Brazil
160.	American Journal Of Translational Research	12	0.10	United States
161.	Cytotherapy	12	0.10	England
162.	Der Unfallchirurg	12	0.10	Germany
163.	International Journal of Molecular Sciences	12	0.10	Switzerland
164.	Journal of Molecular Neuroscience : MN	12	0.10	United States
165.	Journal of Neuroscience Methods	12	0.10	Netherlands
166.	Korean Journal of Spine	12	0.10	Korea (South)
167.	Masui. The Japanese Journal of Anesthesiology	12	0.10	Japan
168.	Medical Science Monitor	12	0.10	United States
169.	Neurology India	12	0.10	India

S.No.	Name of the Journal	No. of Records	%	Country of Publication
170.	Pediatric Neurosurgery	12	0.10	Switzerland
171.	Studies in Health Technology and Informatics	12	0.10	Netherlands
172.	The Canadian Journal of Neurological Sciences. Le Journal Canadien Des Sciences	12	0.10	England
173.	The European Journal of Neuroscience	12	0.10	France
174.	The Journal of Hand Surgery	12	0.10	United States
175.	Acta Chirurgiae Orthopaedicae Et Traumatologiae Cechoslovaca	11	0.09	Czech Republic
176.	Asian Journal of Neurosurgery	11	0.09	India
177.	Clinical Neurophysiology	11	0.09	Netherlands
178.	Journal of Craniovertebral Junction & Spine	11	0.09	India
179.	Journal of Pediatric Orthopedics	11	0.09	United States
180.	Journal of Pediatric Surgery	11	0.09	United States
181.	Journal of Veterinary Internal Medicine	11	0.09	United States
182.	Lancet (London, England)	11	0.09	England
183.	Nature	11	0.09	England
184.	Neurocritical Care	11	0.09	United States
185.	Neuroimage	11	0.09	United States
186.	Neuroscience Research	11	0.09	Ireland
187.	Orthopaedics & Traumatology, Surgery & Research : OTSR	11	0.09	France
188.	Ortopedia, Traumatologia, Rehabilitacja	11	0.09	Poland
189.	Patient Safety in Surgery	11	0.09	England
190.	Physiological Reports	11	0.09	United States
191.	Plastic and Reconstructive Surgery	11	0.09	United States
192.	Rehabilitation Nursing	11	0.09	United States
193.	Sichuan Da Xue Xue Bao. Yi Xue Ban = Journal of Sichuan University. Medical	11	0.09	China
194.	The American Surgeon	11	0.09	United States
195.	The Journal of Small Animal Practice	11	0.09	England
196.	The Journal of Veterinary Medical Science	11	0.09	Japan
197.	Zhong Nan Da Xue Xue Bao. Yi Xue Ban = Journal of Central South University.	11	0.09	China
198.	BMC Musculoskeletal Disorders	10	0.08	England
199.	Cellular Physiology and Biochemistry	10	0.08	Switzerland
200.	Continuum (Minneapolis, Minn.)	10	0.08	United States

S.No.	Name of the Journal	No. of Records	%	Country of Publication
201.	European Journal of Orthopaedic Surgery & Traumatology : Orthopedie Traumatologie	10	0.08	France
202.	Genetics and Molecular Research : GMR	10	0.08	Brazil
203.	Interactive Cardiovascular and Thoracic Surgery	10	0.08	England
204.	International Journal of Clinical and Experimental Pathology	10	0.08	United States
205.	Journal of Pediatric Hematology/Oncology	10	0.08	United States
206.	Korean Journal of Anesthesiology	10	0.08	Korea (South)
207.	Nature Medicine	10	0.08	United States
208.	Restorative Neurology and Neuroscience	10	0.08	Netherlands
209.	The Journal of Sexual Medicine	10	0.08	Netherlands
210.	Therapeutics and Clinical Risk Management	10	0.08	New Zealand
211.	Acta Orthopaedica Belgica	9	0.08	Belgium
212.	BMC Neurology	9	0.08	England
213.	BMJ (Clinical Research Ed.)	9	0.08	England
214.	Case Reports in Orthopedics	9	0.08	United States
215.	Cell Journal	9	0.08	Iran
216.	Der Urologe. Aug. A	9	0.08	Germany
217.	Emergency Medicine Journal : EMJ	9	0.08	England
218.	European Journal of Trauma and Emergency Surgery	9	0.08	Germany
219.	International Orthopaedics	9	0.08	Germany
220.	Journal of Spine Surgery (Hong Kong)	9	0.08	China
221.	Journal of Neuroengineering and Rehabilitation	9	0.08	England
222.	Journal of Neurosciences in Rural Practice	9	0.08	India
223.	JPMA. The Journal of the Pakistan Medical Association	9	0.08	Pakistan
224.	Korean Journal of Neurotrauma	9	0.08	Korea (South)
225.	Nan Fang Yi Ke Da Xue Xue Bao = Journal of Southern Medical University	9	0.08	China
226.	Pediatric Neurology	9	0.08	United States
227.	Regional Anesthesia and Pain Medicine	9	0.08	United States
228.	Shock (Augusta, Ga.)	9	0.08	United States
229.	The Journal of the Association of Physicians of India	9	0.08	India
230.	Undersea & Hyperbaric Medicine	9	0.08	United States
231.	Veterinary and Comparative Orthopaedics and Traumatology : V.C.O.T	9	0.08	Germany
232.	Annals of Cardiothoracic Surgery	8	0.07	China

S.No.	Name of the Journal	No. of Records	%	Country of Publication
233.	Biochemical and Biophysical Research Communications	8	0.07	United States
234.	Biomaterials	8	0.07	Netherlands
235.	British Journal of Nursing (Mark Allen Publishing)	8	0.07	England
236.	Clinics (Sao Paulo, Brazil)	8	0.07	Brazil
237.	Computer Methods in Biomechanics and Biomedical Engineering	8	0.07	England
238.	Electromyography and Clinical Neurophysiology	8	0.07	Belgium
239.	Handbook of Clinical Neurology	8	0.07	Netherlands
240.	Inflammation	8	0.07	United States
241.	Internal Medicine (Tokyo, Japan)	8	0.07	Japan
242.	International Neurourology Journal	8	0.07	Korea (South)
243.	Iranian Journal of Basic Medical Sciences	8	0.07	Iran
244.	Joint, Bone, Spine : Revue Du Rhumatisme	8	0.07	France
245.	Journal De Radiologie	8	0.07	France
246.	Journal of Back And Musculoskeletal Rehabilitation	8	0.07	Netherlands
247.	Journal of Biomedical Materials Research. Part A	8	0.07	United States
248.	Journal of Brachial Plexus And Peripheral Nerve Injury	8	0.07	United States
249.	Journal of Forensic Sciences	8	0.07	United States
250.	Journal of Huazhong University of Science and Technology. Medical Sciences = Hua	8	0.07	China
251.	Journal of Pediatric Rehabilitation Medicine	8	0.07	Netherlands
252.	Journal of the College of Physicians and Surgeons--Pakistan : JCPSP	8	0.07	Pakistan
253.	Nature Communications	8	0.07	England
254.	Neuropeptides	8	0.07	Netherlands
255.	Pain Medicine (Malden, Mass.)	8	0.07	England
256.	Pain Practice : The Official Journal of World Institute of Pain	8	0.07	United States
257.	Physiotherapy Theory and Practice	8	0.07	England
258.	Prosthetics and Orthotics International	8	0.07	England
259.	Radiology	8	0.07	United States
260.	Rehab Management	8	0.07	United States
261.	The American Journal of Forensic Medicine and Pathology	8	0.07	United States
262.	The Journal of Comparative Neurology	8	0.07	United States
263.	The Journal of International Medical Research	8	0.07	England

S.No.	Name of the Journal	No. of Records	%	Country of Publication
264.	The Journal of Physiology	8	0.07	England
265.	The Veterinary Record	8	0.07	England
266.	Translational Stroke Research	8	0.07	United States
267.	Zeitschrift Fur Orthopadie Und Unfallchirurgie	8	0.07	Germany

CONCLUSION:

The results show that Spinal Cord Injury literature is growing year after year. United States records on Spinal Cord Injury literature covered huge numbers followed by England. Journal articles cover the maximum number of records. English language dominates in the field of Spinal Cord Injury literature. Primary Journals in the field of Spinal Cord Injury literature are identified.

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