ABSTRACT

This study analyses the research output on rabies, one of the most vulnerable zoonotic disease in developing countries. The worldwide annual incidence of human rabies is accounted to be near about 60,000. India alone accounted for 40,000 human deaths due to rabies and most vulnerable country in the world.

The data for this study was downloaded from PubMed database for the period 1840–2015. A total number of 13468 articles were published various sources in the domain during the study period. The highest research output of 2541 (18.87%) articles published during 2010 – 2015. The highest output of literature published in English, 75.27% (10138 articles). Journal article holds the first place and 10083 articles (75%), in the terms of source of publications. The growth rate decreased during 1980-89 (0.03) on the other hand the doubling time has been increasing during the same period (23.10). The lowest doubling time during 1940-1949 (0.44) and the other hand highest growth rate have been increasing during the same period (1.55).

The European continent produced the highest number of articles 6114 (45.39%) and holds the 1st rank, followed by North America produced 32.71% of the literature and holds the 2nd rank. Asian continent produced 6.51% of the literature and holds the 3rd rank, followed by the South American continent produced 2.03% of the literature and holds the 4th rank. The 5th rank holds by Africa, produced 1.66% of the literature. The Australian continent produced 0.78% of the literature and holds the 6th rank. Country wise analysis, it is revealed that the United States produced the highest number of articles (29.72%), followed by England produced next to the United States (14.38%). The two countries together produced 44.10% of the literature in this domain.

The study examined intergovernmental organizational literature production in the domain. India produced the highest number of articles, among SAARC Countries (326 articles). England produced the highest number of articles, among Common Wealth Countries (1937 articles). Among BRICS Countries Russian Federation produced the highest number of articles (398 articles). The study also examined, developed and developing countries’ literature production in the domain. The developed countries together produced
60.38% of the total literature output. On the other hand a total number of 52 developing countries together produced a total number of 1518 (11.24%) articles. The Pearson correlation coefficient calculation the correlation between Developed and Developing countries is \( r = 0.9134 \).

The study identified 50 core journals in the domain. The journal ‘Vaccine’ published by Elsevier from Netherlands holds the 1\textsuperscript{st} rank and the journal published 375 (2.78%) articles. The study does not apply to the Bradford law of journals scattering.

The study identified the top 50 prolific authors; Rupprecht CE holds the 1\textsuperscript{st} rank. The study revealed that 12 prolific authors belong to the United States; the study identified that only one Indian prolific author; Madhusudana SN belongs to the National Institute of Mental Health and Neurosciences (NIMHANS), Bangalore, Karnataka, India holds the 19\textsuperscript{th} rank. The study identified that the 4 authored team contributes more articles (5282 articles, 13.24%). The study revealed that a total number of 8919 works produced by multi authors and 4549 papers produced by single authors. The degree of collaboration low during 1900-09 and C=0.08. The degree of collaboration high during 2010-15 and C= 0.89. The mean average degree of collaboration is 0.66 during the study period. The study indicates 66% of co-working nature in rabies research. The study examined authors productivity in the domain using Lotka’s Law. Totally 42,887 authors contributed to the area of rabies research during the study period. 30241 (44.54%) authors contributed single paper in the domain.

The top 30 institutions produced a total number of 2355 articles; it is accounted for 17.48% of global institutional literature output. The Centers for Disease Control & Prevention, Atlanta, Georgia, USA holds the 1st rank. The leading Indian Institution is; The National Institute of Mental Health and Neurosciences (NIMHANS), Bangalore, Karnataka, holds the 17th rank.

A total number of 13468 articles published for 176 years during 1840 - 2015 at the global level, it accounts for the mean average of 76.52 articles per year. There is an increasing need for research in this field in developing countries; particularly India will engage more scientists in the field.