

# Chapter 1

## Mapping the Intellectual Structure of the Field Neurological Disorders: A Bibliometric Analysis

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### **ABSTRACT**

*The chapter utilizes bibliometric tools to explore papers in the field of neurological disorders and to examine the scientific development in the above subject domain. The research data were retrieved from the WOS database, which consists of 16,830 papers on the above phrase, but for the current study was limited to only those articles that have received more than four citations. Using this criterion, the data was narrowed to 10,694 as of 25/6/18. Using bibliometric tools, the author has identified the most productive authors, most productive countries, annual scientific production with an average growth rate of 4.82, and average article citations per year was 44.85. Network analysis was carried out to find co-citation network pattern, and with co-word analysis, found the conceptual structure of a field of neurological disorders.*

### **INTRODUCTION**

Neurological clutters are infections of the mind, spine and the nerves that interface them. There are in excess of 600 maladies of the sensory system, for example, cerebrum tumours, epilepsy, Parkinson's sickness and stroke and in addition less natural ones, for example, front temporal dementia. The investigation of nervous system science and neurosurgery goes back to ancient occasions; however the scholarly trains did not start until the sixteenth century. From an observational science they built up an efficient method for moving toward the sensory system and conceivable mediations in neurological infection. John Fothergill (1712–1780), James Parkinson (1755–1824) and on three writers of early nineteenth-century British neurological texts, namely John Cooke (1756–1838), Charles Bell (1774–1841) and Marshall Hall (1790–1857), are considered prolific contributions to the history of the neurosciences (Clifford. F,

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1999). The ebb and flow study will distinguish the breakthrough in the improvement of the subject area of “neurological disorder” over the timeframe and connected scientometric strategies into logical writing of this field and we have endeavoured to think about the development of subject over the timeframe and who are the most productive writers in this field and to examine the commitment by different writers and nations to this exploration front.

## **BIBLIOMETRICS AND ITS UTILIZATION**

Bibliometrics is stressed over the examination of research subject to citation counts and precedents. The individual assessments used are in like manner routinely insinuated as bibliometrics, or citation estimations. They can be used to survey the effect of an individual research yield, for instance, a journal article, or a collection of research yields, for instance, all works by an explicit author, research social occasion or institution.

Bibliometrics can be used as an indication of the hugeness and impact of your work or that of a research social event, office or school, and therefore of its motivating force to the more broad research arrange. Bibliometrics are continuously being used to measure and rank research yield both inside institutions and on a national or worldwide measurement. School rankings may consider and they are utilized in the Research Excellence Framework (REF). Bibliometrics can be used as a gadget to recognize research characteristics and light up decisions about future research interests.

Bibliometrics ponder helps to understand research productivity (Counts of papers) in explicit subject space. Impact of the distribution in a region can be evaluated utilizing Citation checks which help us to consider the Indirect acknowledgment/impact (second-age citation tallies) and papers and journals are positioned utilizing normal citation per paper which has bring forth Journal Impact factor and H-Index . Research fronts, Collaboration markers and Trend examination (Time arrangement) can be considers utilizing bibliometrics

## **LITERATURE REVIEW**

Bibliometrics is an arrangement of numerical and factual strategies used to dissect and measure the amount and nature of books, articles and different types of production. There are three sorts of bibliometric pointers: Quantity markers, which measure the efficiency of a specific research, quality markers which estimate the nature of an exploration’s yield, and basic pointers, which measure associations between distributions (Durieux, 2010). Inside the wide zone of neurological science, many subject-particular examinations have been completed; one of the vital research fronts is epilepsy which had pulled in noticeable reference (Ibrahim, 2012). Bibliometric study on the literature output on the area of bipolar disorder and schizophrenia research and its funding pattern was assessed. There is a general deficiency of research exercises on bipolar disorder differentiated and schizophrenia (Clement & Singh, 2003). Recovery was under-spoken to in the neurological writing on incapacitating infections. The finding featured that over the different neurologic conditions, the heaviness of Rehab writing was extremely negligible. The outcomes recommend that nervous system science is as yet hesitant to confront the incapacity challenges (Tesio & Gamba, 1995). The examination enthusiasm for uncommon neurological conditions is excessively bigger than that in like manner conditions. Our outcomes bolster an adjustment

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