

# Characteristic Features of 100 Most Influential Studies in Evidence-Based Medicine: A Worldwide Bibliometric Analysis

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## ABSTRACT

**Introduction:** Evidence-based medicine (EBM) is important to improve healthcare decisions using the scientific method to establish and apply current data.

**Aim:** This bibliometric analysis aimed to identify and characterize the top 100 most cited publications in EBM.

**Methods:** The Web of Science Core Collection database was searched using the search term "Evidence-based medicine OR Evidence based medicine OR EBM" in the title field. The top 100 most cited publications were selected based on the number of citations. The included publications were then exported into HistCite™ and VOSviewer for further analysis.

**Results:** The initial search yielded a total of 4,556 publications. Out of these, the 100 most influential publications were authored by 344 authors published in 54 journals from 1992 to 2019. The global citation score (GCS) ranged from 101 to 7078 citations, with total citations of 31594. A total of 214 institutions and 23 countries were involved. The most frequent year of publication was 2004. The most prolific author in EBM was Sackett DL. The McMaster University was the leading institute, while the most influential and highly contributing country was the United States of America (USA). The *BMJ* was the most attractive journal.

**Conclusions:** Researchers of developed countries were actively involved in EBM most cited papers. This study could serve as a standard benchmark for bibliographic information and future research trends and funding in EBM research.

**Keywords:** evidence-based medicine, bibliometric analysis, HistCite™, VOSviewer

## INTRODUCTION

Evidence-based medicine (EBM) is important to improve healthcare decisions using the scientific method to establish and apply current data. Based on the quality evidence and judgment, the basic goal of EBM is to improve medical outcomes [1]. Historically, EBM has preferentially assessed the effectiveness of therapeutic interventions by randomizing the randomized controlled trial (RCT) based on their ability to balance the forecast factors between experimental and control groups. However, observational studies of interventions have been incorporated into evidence hierarchies in the Grading Recommendations assessment and evaluation system, although classified as lower in the context of the freedom from prejudicial behavior. Future research studies, particularly RCTs, are not feasible due to ethics concerns, logistical obstacles, limited timelines, costs, inability to recruit patients or clinicians, and use of observational data and machine learning. Machine learning offers a way to determine and analyze a personalized 'virtual cohort' of people who have at

least predictable a collective recorded clinical destiny for a particular patient as any RCT [2]. Health outcomes are optimized by using the best available evidence for healthcare decisions. As evidenced by scientific papers' growth directly relevant to physiotherapy between 1995 and 2015, EBM topics were increasingly debated and discussed, with RCTs and systemic reviews rising respectively from 45.1 59.4% and from 0 to 14.6%. Combined, 74% of physiotherapeutic research publications in 2015 accounted for RCTs and systemic reviews compared to 45% in the last two decades [3].

Bibliometric analysis is a useful tool to evaluate, identify, characterize, and figure out research trends, visualizations mapping, and characterizing most highly cited studies in different domains such as library science, computer science, environmental science, management, public health, medicine, etc. Based on our pre-search, bibliometric studies' growth rate has been significantly increased over the past two decades. In addition, great interests have been found in bibliometric studies in China, the USA, and Spain.

**Table 1.** Publication year of the top 100 highly cited papers

| Publication Year | Records | Percent | LCS | GCS  |
|------------------|---------|---------|-----|------|
| 1992             | 1       | 1       | 28  | 2399 |
| 1995             | 6       | 6       | 36  | 2098 |
| 1996             | 1       | 1       | 33  | 7078 |
| 1997             | 5       | 5       | 9   | 1094 |
| 1998             | 6       | 6       | 11  | 1477 |
| 1999             | 5       | 5       | 7   | 820  |
| 2000             | 5       | 5       | 8   | 1469 |
| 2001             | 4       | 4       | 2   | 617  |
| 2002             | 8       | 8       | 4   | 1318 |
| 2003             | 5       | 5       | 2   | 1488 |
| 2004             | 9       | 9       | 2   | 2197 |
| 2005             | 6       | 6       | 3   | 819  |
| 2006             | 3       | 3       | 0   | 1114 |
| 2007             | 2       | 2       | 0   | 226  |
| 2008             | 5       | 5       | 6   | 773  |
| 2009             | 4       | 4       | 0   | 929  |
| 2010             | 4       | 4       | 1   | 992  |
| 2011             | 4       | 4       | 3   | 1444 |
| 2013             | 3       | 3       | 1   | 426  |
| 2014             | 8       | 8       | 0   | 1980 |
| 2016             | 2       | 2       | 1   | 214  |
| 2017             | 1       | 1       | 0   | 173  |
| 2018             | 2       | 2       | 1   | 310  |
| 2019             | 1       | 1       | 0   | 139  |

LCS: Local citation score, GCS: Global citation score

Researchers across the world are extracting data from Web of Science, Scopus, PubMed, Google Scholar, and other databases to perform bibliometric analysis. In the light of recently published literature, we used the Web of Science database. The Web of Science is more friendly, with some unique features, and easy to operate. The other studies conducted in different disciplines also used the Web of Science database [4-14].

We aimed to identify and characterize many attributes of the top 100 most influential publications in EBM worldwide. At present, there is no such kind of study available. Therefore, this study was designed to provide a comprehensive overview of EBM-related most cited publications and their characteristic features.

## METHODS

A descriptive bibliometric study was performed. On January 21, 2021 a comprehensive search in the Web of Science Core Collection database (<https://www.webofknowledge.com>) hosted by Clarivate Analytics was performed on EMB. The search keywords included “Evidence-based medicine OR Evidence based medicine OR EBM” in the title field following the Boolean search quarry method. The top 100 most cited publications were ranked from highest to lowest based on their citations. The dataset was downloaded in both comma-separated values file and plain text format.

The obtained dataset was exported into a Microsoft Excel sheet for specific information extraction such as author name, journal, publication year, keyword, document type, institution, and country. The plain text dataset was exported into HistCite™ for citation count. The dataset was then exported in to VOSviewer software version 1.6.16 for windows [15]. The visualization network mapping such as co-authorship country and co-occurrence author keywords was constructed.

**Table 2.** Types of document

| Document types     | Records | Percent | LCS | GCS   |
|--------------------|---------|---------|-----|-------|
| Article            | 51      | 51      | 80  | 13456 |
| Review             | 26      | 26      | 17  | 6017  |
| Editorial material | 18      | 18      | 57  | 11432 |
| Proceedings paper  | 4       | 4       | 4   | 570   |
| Reprint            | 1       | 1       | 0   | 119   |

LCS: Local citation score, GCS: Global citation score

## RESULTS

The last search yielded a total of 4556 publications on EBM. The characteristic features of 100 highly influential publications were authored by 344 authors, published in 54 journals, with 394 keywords and 5445 cited references. All the papers were published in the English language. The time span was from 1992 - 2019 (28 years). A total of 214 institutions and 23 countries were involved in the 100 highly cited papers. The global citation score (GCS) ranged from 101 to 7078 citations, with total citations of 31594. Of the total included paper, the maximum papers (n=9) were published in 2004, followed by 2002 and 2014 (n=8) each (**Table 1**). Most papers were published as original articles (n=51) and review (n=26), as shown in **Table 2**. The “Evidence,” “Based,” and “Medicine” were the most frequently used words with 100 times occurrences (**Table 3**). Sackett DL (n=6), Guyatt G (n=5), and Haynes RB (n=5) were the most active authors in EBM-based research (**Table 4**).

**Table 3.** The occurrence of a keyword at least 3 times

| Word           | Records | Percent |
|----------------|---------|---------|
| Based          | 100     | 100     |
| Evidence       | 100     | 100     |
| Medicine       | 100     | 100     |
| Review         | 14      | 14      |
| Clinical       | 10      | 10      |
| Patient        | 9       | 9       |
| Practice       | 9       | 9       |
| Society        | 9       | 9       |
| Treatment      | 8       | 8       |
| Care           | 7       | 7       |
| Guidelines     | 7       | 7       |
| Disease        | 6       | 6       |
| Management     | 6       | 6       |
| Pain           | 6       | 6       |
| Report         | 6       | 6       |
| Role           | 6       | 6       |
| Systematic     | 6       | 6       |
| Approach       | 5       | 5       |
| Decision       | 5       | 5       |
| General        | 5       | 5       |
| Movement       | 5       | 5       |
| American       | 4       | 4       |
| Analysis       | 4       | 4       |
| Health         | 4       | 4       |
| International  | 4       | 4       |
| Parkinson      | 4       | 4       |
| Part           | 4       | 4       |
| Patients       | 4       | 4       |
| Symptoms       | 4       | 4       |
| Treatments     | 4       | 4       |
| Update         | 4       | 4       |
| Anesthesia     | 3       | 3       |
| Antithrombotic | 3       | 3       |

**Table 3 (continued).** The occurrence of a keyword at least 3 times

| Word           | Records | Percent |
|----------------|---------|---------|
| Committee      | 3       | 3       |
| Critical       | 3       | 3       |
| Definition     | 3       | 3       |
| Disorder       | 3       | 3       |
| Ejaculation    | 3       | 3       |
| Evaluation     | 3       | 3       |
| Hoc            | 3       | 3       |
| Improve        | 3       | 3       |
| Interventional | 3       | 3       |
| Lifelong       | 3       | 3       |
| Motor          | 3       | 3       |
| Premature      | 3       | 3       |
| Qualitative    | 3       | 3       |
| Randomized     | 3       | 3       |
| Regional       | 3       | 3       |
| Reviews        | 3       | 3       |
| Second         | 3       | 3       |
| Sexual         | 3       | 3       |
| Support        | 3       | 3       |
| Teaching       | 3       | 3       |
| Therapy        | 3       | 3       |
| Unified        | 3       | 3       |

**Table 4.** The author with at least 3 publications

| Author           | Records | Percent | LCS | LCS/t | GCS  | GCS/t  | LCR |
|------------------|---------|---------|-----|-------|------|--------|-----|
| Sackett DL       | 6       | 6       | 52  | 2.14  | 8168 | 343.81 | 9   |
| Guyatt G         | 5       | 5       | 31  | 1.17  | 3127 | 130.27 | 4   |
| Haynes RB        | 5       | 5       | 37  | 1.58  | 8118 | 351.79 | 12  |
| Coelho M         | 4       | 4       | 4   | 0.83  | 1110 | 301.33 | 5   |
| Fox SH           | 4       | 4       | 4   | 0.83  | 1110 | 301.33 | 5   |
| Katzenschlager R | 4       | 4       | 4   | 0.83  | 1110 | 301.33 | 5   |
| Rosenberg WMC    | 4       | 4       | 41  | 1.70  | 7589 | 319.75 | 6   |
| Sampaio C        | 4       | 4       | 4   | 0.83  | 1110 | 301.33 | 5   |
| Seppi K          | 4       | 4       | 4   | 0.83  | 1110 | 301.33 | 5   |
| Althof SE        | 3       | 3       | 2   | 0.17  | 656  | 89     | 5   |
| Dean J           | 3       | 3       | 2   | 0.17  | 656  | 89     | 5   |
| Giraldi A        | 3       | 3       | 2   | 0.17  | 656  | 89     | 5   |
| Giuliano F       | 3       | 3       | 2   | 0.17  | 656  | 89     | 5   |
| Green ML         | 3       | 3       | 6   | 0.27  | 373  | 19.60  | 10  |
| Greenhalgh T     | 3       | 3       | 1   | 0.05  | 1174 | 143.42 | 5   |
| Guyatt GH        | 3       | 3       | 6   | 0.37  | 785  | 93.2   | 12  |
| Hellstrom WJG    | 3       | 3       | 2   | 0.17  | 656  | 89     | 5   |
| Incrocci L       | 3       | 3       | 2   | 0.17  | 656  | 89     | 5   |
| Lim SY           | 3       | 3       | 3   | 0.72  | 619  | 246.78 | 5   |
| Manchikanti L    | 3       | 3       | 2   | 0.17  | 682  | 60.14  | 8   |
| McMahon CG       | 3       | 3       | 2   | 0.17  | 656  | 89     | 5   |
| Montori VM       | 3       | 3       | 3   | 0.31  | 457  | 60.43  | 5   |
| Poewe W          | 3       | 3       | 3   | 0.33  | 970  | 231.33 | 4   |
| Richardson WS    | 3       | 3       | 37  | 1.58  | 7661 | 327.27 | 7   |
| Waldinger MD     | 3       | 3       | 2   | 0.17  | 656  | 89     | 5   |
| Wyer PC          | 3       | 3       | 1   | 0.06  | 570  | 34.28  | 0   |

LCS: Local citation score, LCS/t: Local citation score per year, GCS: Global citation score, GCS/t: Global citation score per year, LCR: Local cited references

The citation analysis shows that *The BMJ* came up with two titles *BMJ-British Medical Journal* (n=8) and *British Medical Journal* (n=7). Thus, *The BMJ* was the leading journal (n=15), followed by *JAMA-Journal of the American Medical Association* (n=10). The journals published at least three highly cited papers that are presented in **Table 5**.

The McMaster University (n=12) and University of California San Francisco (n=10) were the leading institutions (**Table 6**).

**Table 5.** Journal published at least 3 highly cited papers

| Journal  | Records | LCS | LCS/t | GCS    | GCS/t  | LCR | IF    |
|--|---------|-----|-------|--------|--------|-----|-------|
| <i>The BMJ</i>                                   | 15      | 50  | 2.10  | 11,878 | 630.41 | 19  | 30.22 |
| JAMA-Journal of the American Medical Association | 10      | 38  | 1.68  | 4243   | 220.68 | 16  | 45.54 |
| Canadian Medical Association Journal             | 4       | 10  | 0.49  | 872    | 48.56  | 11  | 7.74  |
| Lancet   | 4       | 20  | 0.81  | 1086   | 94.744 | 10  | 60.39 |
| Movement Disorders                               | 4       | 4   | 0.83  | 1110   | 301.33 | 5   | 8.68  |
| Academic Medicine                                | 3       | 4   | 0.19  | 449    | 23.30  | 13  | 5.35  |
| Pain Physician                                   | 3       | 2   | 0.17  | 682    | 60.14  | 8   | 3.25  |
| Regional Anesthesia and Pain Medicine            | 3       | 1   | 0.1   | 953    | 163.3  | 1   | 7.02  |

LCS: Local citation score, LCS/t: Local citation score per year, GCS: Global citation score, GCS/t: Global citation score per year, LCR: Local cited references, IF: Impact Factor (2020 Journal Citation Reports by Clarivate Analytics released in June 2021). Note: *BMJ-British Medical Journal* and *British Medical Journal* both the journal titles representing *The BMJ*.

**Table 6.** The institution with at least 3 publications

| Institution                               | Records | Percent | LCS | GCS  |
|---|---------|---------|-----|------|
| McMaster University                       | 12      | 12      | 48  | 9347 |
| University of California San Francisco    | 10      | 10      | 2   | 2145 |
| Mayo Clinic                               | 8       | 8       | 6   | 1833 |
| Yale University                           | 7       | 7       | 7   | 1542 |
| Baylor College of Medicine                | 5       | 5       | 0   | 959  |
| Harvard University                        | 5       | 5       | 2   | 1930 |
| University of Oxford                      | 5       | 5       | 34  | 8287 |
| University of Pennsylvania                | 5       | 5       | 1   | 1033 |
| Duke University                           | 4       | 4       | 1   | 933  |
| John Radcliffe Hospital                   | 4       | 4       | 19  | 1082 |
| Stanford University                       | 4       | 4       | 1   | 1255 |
| Toronto Western Hospital                  | 4       | 4       | 4   | 1110 |
| University of Buenos Aires                | 4       | 4       | 2   | 795  |
| University of Rochester                   | 4       | 4       | 33  | 7497 |
| University of Toronto                     | 4       | 4       | 5   | 864  |
| University of Washington                  | 4       | 4       | 1   | 606  |
| Anglia & Oxford Regional Health Authority | 3       | 3       | 39  | 7810 |
| Australian Centre for Sexual Health       | 3       | 3       | 2   | 656  |
| Case Western Reserve University           | 3       | 3       | 2   | 656  |
| Hospital Raymond Poincare                 | 3       | 3       | 2   | 656  |
| Massachusetts General Hospital            | 3       | 3       | 1   | 737  |
| Medizinische Universität Innsbruck        | 3       | 3       | 2   | 770  |
| National University of Singapore          | 3       | 3       | 2   | 656  |
| Northwestern University                   | 3       | 3       | 1   | 935  |
| Oregon Health & Science University        | 3       | 3       | 0   | 553  |
| Rigshospitalet                            | 3       | 3       | 2   | 656  |
| Tulane University                         | 3       | 3       | 2   | 656  |
| University of Amsterdam                   | 3       | 3       | 3   | 485  |
| University of California, Davis           | 3       | 3       | 1   | 704  |
| University of Lisbon                      | 3       | 3       | 2   | 770  |
| University of Louisville                  | 3       | 3       | 2   | 682  |
| University of Malaya                      | 3       | 3       | 3   | 619  |
| University of Utrecht                     | 3       | 3       | 1   | 796  |
| Valparaiso University                     | 3       | 3       | 2   | 656  |
| Wayne State University                    | 3       | 3       | 0   | 408  |

LCS: Local citation score, GCS: Global citation score

The USA was the most productive country with 60 publications, followed by the United Kingdom (UK) (n=23) and Canada (n=22), as shown in **Table 7**.

The highly cited (n=7078) paper “Evidence-based medicine: What it is and what it isn’t - It’s about integrating individual

**Table 7.** Country with least 3 publications

| Country     | Records | Percent | LCS | GCS   |
|-------------|---------|---------|-----|-------|
| USA         | 60      | 60      | 62  | 20463 |
| UK          | 23      | 23      | 69  | 12646 |
| Canada      | 22      | 22      | 90  | 13944 |
| Australia   | 9       | 9       | 4   | 1463  |
| Netherlands | 9       | 9       | 5   | 1699  |
| France      | 7       | 7       | 5   | 1728  |
| Italy       | 5       | 5       | 0   | 821   |
| Portugal    | 5       | 5       | 4   | 1219  |
| Unknown     | 5       | 5       | 11  | 911   |
| Argentina   | 4       | 4       | 2   | 795   |
| Austria     | 4       | 4       | 4   | 1110  |
| Belgium     | 3       | 3       | 0   | 446   |
| Denmark     | 3       | 3       | 2   | 656   |
| Germany     | 3       | 3       | 2   | 611   |
| Malaysia    | 3       | 3       | 3   | 619   |
| Singapore   | 3       | 3       | 2   | 656   |

LCS: Local citation score, GCS: Global citation score

clinical expertise and the best external evidence” was authored by Sackett et al. (1996) published in *British Medical Journal*. The top 10 most cited papers are presented in **Table 8** and **Supplementary Table 1**.

#### Co-authorship Countries

The visualization network map of co-authorship countries based on total link strength (TLS) is presented in **Figure 1**. The top 3 ranked countries were the USA (TLS=75), France (TLS=42), and Canada (TLS=39). The countries/regions (India, Greece, Sweden, Taiwan) with TLS below five were excluded from mapping. Of the total countries, 18 meet the thresholds and formed three clusters; cluster 1 (Argentina, Australia, Brazil, Denmark, England, France, Italy, Netherlands, Singapore, Turkey), cluster 2 (Austria, Canada, Malaysia, Philippines, Portugal, USA), and cluster 3 (Belgium, Germany).

#### Co-occurrence Author Keywords

The most frequently used keyword was evidence-based medicine (occurrence=19, TLS=107). After plotting the data, a total of nine clusters were formed, and each color indicated a different cluster. The network visualization mapping of co-occurrence author keywords is presented in **Figure 2**.

#### DISCUSSION

In recent years, life-threatening diseases have spread worldwide, affecting millions of people every year. It is perhaps not surprising that the disease speed and severity have challenged both public health and direct clinical care traditional knowledge translation models [16]. Some of the recently emerged viral diseases posed serious health emergency; people are appropriately scared and are naturally looking for medicines to prevent or cure the disease [17-19]. There is no shortage of suggestions from public policy advice on essentially shutting down the societies of people who have been recovered from diseases such as Coronavirus Disease 2019 (COVID-19), using a host of antibiotics, antiviral drugs, antimalaria drugs, and antibody-carrying plasma [20].

Many have forgotten everything we do for our critically ill patients in this age of increasing work and uncertainty. The lack of high-quality proof of benefit to a medication is not just about standing there and doing nothing. Rather than just doing something for our patients, it is proof-based critical attention. It gives them the best chance to survive without complications and does not endanger them from unproven care for bad results [21].

This study is the first comprehensive bibliometric analysis summarizing the many features of the most cited publications on EBM. Analysis of most cited publications on EBM may be worthwhile to keep the young researchers and clinicians

**Table 8.** Top 10 most cited publications in EBM research

| Ranking | References  | Publication type   | LCS | GCS  | GCS/t  |
|---------|---|--------------------|-----|------|--------|
| 1       | Sackett DL, et al. Evidence based medicine: What it is and what it isn't - It's about integrating individual clinical expertise and the best external evidence. <i>British Medical Journal</i> . 1996; 312 (7023): 71-72.   | Editorial material | 33  | 7078 | 294.92 |
| 2       | Guyatt G. Evidence-Based Medicine - A New Approach to Teaching the Practice of Medicine. <i>JAMA-Journal Of The American Medical Association</i> . 1992; 268 (17): 2420-2425.   | Article            | 28  | 2399 | 85.68  |
| 3       | Lau J, et al. Evidence based medicine - The case of the misleading funnel plot. <i>BMJ-British Medical Journal</i> . 2006; 333 (7568): 597-600.   | Editorial material | 0   | 789  | 56.36  |
| 4       | Bates DW, et al. Ten commandments for effective clinical decision support: Making the practice of evidence-based medicine a reality. <i>Journal of the American Medical Informatics Association</i> . 2003; 10 (6): 523-530   | Article            | 0   | 743  | 43.71  |
| 5       | Greenhalgh T, et al. ESSAY Evidence based medicine: a movement in crisis? <i>BMJ-British Medical Journal</i> . 2014; 348.   | Editorial material | 0   | 722  | 120.33 |
| 6       | Horlocker TT, et al. Regional Anesthesia in the Patient Receiving Antithrombotic or Thrombolytic Therapy American Society of Regional Anesthesia and Pain Medicine Evidence-Based Guidelines (Third Edition). <i>Regional Anesthesia and Pain Medicine</i> . 2010; 35 (1): 64-101 | Review             | 1   | 662  | 66.20  |
| 7       | Rosenberg W, Donald A. Evidence Based Medicine - An Approach To Clinical Problem-Solving. <i>BMJ-British Medical Journal</i> . 1995; 310 (6987): 1122-1126  | Article            | 6   | 613  | 24.52  |
| 8       | Burns PB, et al. The Levels of Evidence and Their Role in Evidence-Based Medicine. <i>Plastic and Reconstructive Surgery</i> . 2011; 128 (1): 305-310   | Article            | 0   | 509  | 56.56  |
| 9       | Seppi K, et al. The Movement Disorder Society Evidence-Based Medicine Review Update: Treatments for the Non-Motor Symptoms of Parkinson's Disease. <i>Movement Disorders</i> . 2011; 26: S42-S80.   | Review             | 1   | 491  | 54.56  |
| 10      | McColl A, et al. General practitioners' perceptions of the route to evidence based medicine: a questionnaire survey. <i>British Medical Journal</i> . 1998; 316 (7128): 361-365.  | Article            | 4   | 485  | 22.05  |

LCS: Local citation score, GCS: Global citation score, GCS/t: Global citation score per year

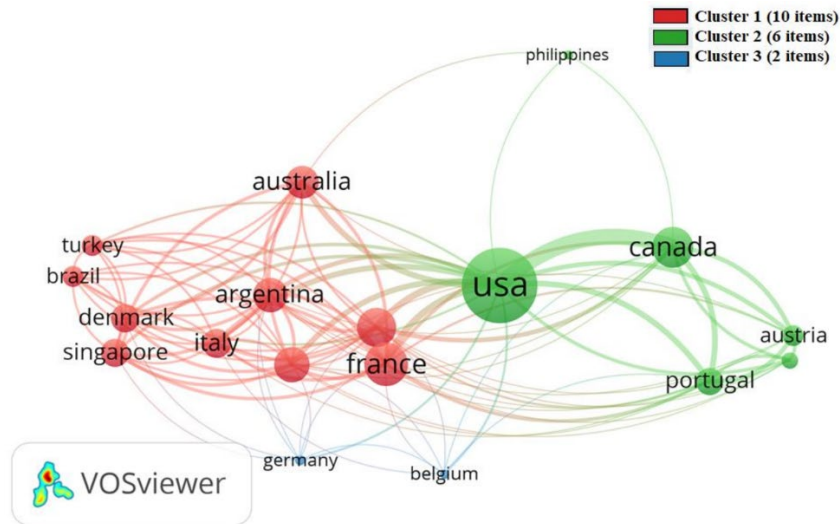
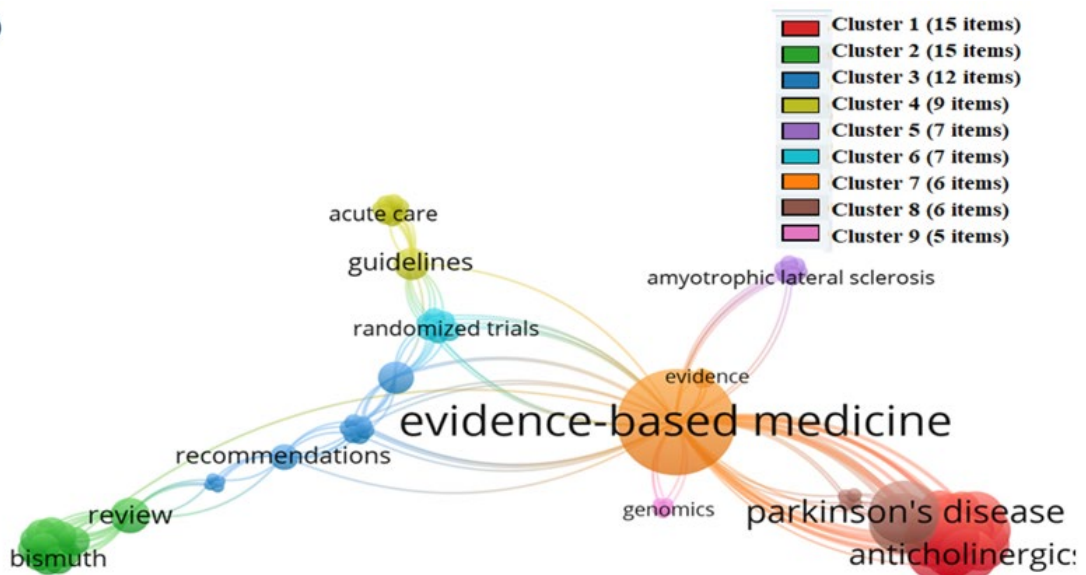


Figure 1. Co-authorship countries network visualization mapping

(A)



(B)

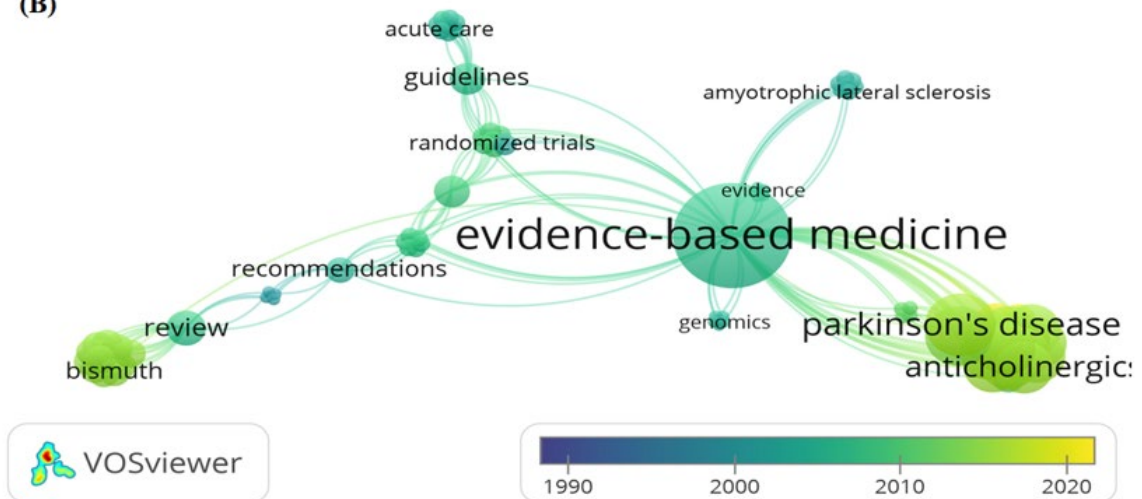


Figure 2. Co-occurrence author keywords visualization mapping; (A) network visualization (B) overlay visualization by time (year)



abreast of classic knowledge. This will be helpful for the clinician to make the decision on the basis of results from previous studies.

EBM plays an important role in precise treatment, which has led the patients to get minimum side effects. One of the important achievements in this field is the development of meta-analysis and systematic review. Researchers can easily identify the multiple studies on the same topic by such studies, select the best one, and summarize the best available evidence after critical analysis.

This bibliometric study has selected 100 most influential publications out of 4556 documents on EBM published during the last three decades (28 years). During this duration, the citation and publication pattern is not smooth. It kept changing from year to year. Most papers were published (9) in 2004, and the highest citations (2197) were also recorded in the same year. But this trend does not apply to all published papers. In 1992, only 1 document was published with 28 local citation score (LCS) and 2399 GCS, while 6 documents were published in 1998 but yielded only 11 LCS and 1477 GCS. It illustrates that the number of published materials in a year is not directly associated with the number of citations obtained.

The countries that published most papers on EBM and got citations are mostly from Europe, the USA, and some from Asia. Authors from the USA published 62, from the UK published only 23, while from Asia, Malaysia and Singapore published 3 documents each. It has been observed that the publications are directly associated with the funds allocated for the specific research area. The higher the allocation of research funds, the higher the frequency of publications. This is evident from the results that none of the low-income countries has yielded any articles among top 100 publications on EBM.

The top 100 documents were published in English language. However, 51% of documents were original articles, 26% reviews, 18% editorial material, and 4% proceeding papers. This trend illustrates that English is a widely used language to exchange scientific findings, and the majority of the scientific results in EBM are being published resulting from experimental works though the share of review and other articles are also countable.

As is the case with other research areas, most of the leading authors in the EBM research were from developed nations such as the USA, Canada, Germany, UK, and Singapore. However, publications' trends are significantly low in limited resources countries due to limited research resources and fundings. The most frequently cited keywords and research areas linked with EBM studies reflect the research focus during the research. It has a wide range (51 keywords repeated at least 3 times) in the case of EBM, while in most of the diseases, this was usually short. It included evidence, medicine, medical, clinical, treatment, and other words relevant to EBM. Journals are an important tool for disseminating research, and the quality of journals plays a significant role in the effective transmission of research.

This study provides a point of reference for researchers and medical practitioners and will prove a baseline for policymakers to devise effective techniques for making decisions. More research is needed to be done in this field, and scientists, especially from disease burdened countries, should be encouraged to conduct high research and share their findings in peer-reviewed journals.

## Study Limitation

In this study, a single database was used, which may bias the results.

## CONCLUSION

This study provides a comprehensive overview of most influential and cited publications in EBM. The USA was ranked as the most productive and active country in EBM research. The trends of publications were significantly higher in developed countries as compared to low-income countries. The findings may help the researchers, policymakers, and funding agencies for future research directions and identify hotspots. Low- and middle-income countries need to be supported through adequate research funding and by collaborating with them to upgrade the technical skills as well as scientific writing skills of researchers and clinicians. Furthermore, we believe that the characteristics of EBM top cited papers presented herein will definitely be the important source of scientific information for research and academic purposes. In addition, we hope that EBM practices will enhance treatment effect and health outcome.

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**Declaration of interest:** No conflict of interest is declared by authors.

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4. Zhang S, Zhao D, Jia W, et al. A bibliometric analysis and review of recent researches on TRPM7. *Channels (Austin)* 2020;14:203-15. <https://doi.org/10.1080/19336950.2020.1788355> PMID:32643506 PMCid:PMC7515573
5. Guo L, Lu G, Tian J. A Bibliometric Analysis of Cirrhosis Nursing Research on Web of Science. *Gastroenterol Nurs* 2020;43:232-40. <https://doi.org/10.1097/SGA.0000000000000457> PMID:32487955
6. Chen YM, Wang XQ. Bibliometric Analysis of Exercise and Neuropathic Pain Research. *J Pain Res* 2020;13:1533-45. <https://doi.org/10.2147/JPR.S258696> PMID:32612381 PMCid:PMC7323814
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9. Huang L, Shi X, Zhang N, et al. Bibliometric analysis of trends and issues in traditional medicine for stroke research: 2004-2018. *BMC Complement Med Ther* 2020;20:39. <https://doi.org/10.1186/s12906-020-2832-x> PMID:32033545 PMCID:PMC7076850
10. Ahmad T, Nasir S, Musa TH, et al. Epidemiology, diagnosis, vaccines, and bibliometric analysis of the 100 top-cited studies on Hepatitis E virus. *Hum Vaccin Immunother* 2020;1-15. <https://doi.org/10.1080/21645515.2020.1795458> PMID:32755437 PMCID:PMC7993234
11. Şenel E, Muslu Ü. Global trends of Botulinum toxin literature: A bibliometric analysis of Botulinum toxin publications between 1975 and 2017. *J Cutan Aesthet Surg* 2020;13:95-102. [https://doi.org/10.4103/JCAS.JCAS\\_111\\_19](https://doi.org/10.4103/JCAS.JCAS_111_19) PMID:32792770 PMCID:PMC7394113
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13. Ubando AT, Africa ADM, Maniquiz-Redillas MC, et al. Microalgal biosorption of heavy metals: A comprehensive bibliometric review. *J Hazard Mater* 2021;402:123431. <https://doi.org/10.1016/j.jhazmat.2020.123431> PMID:32745872
14. Huang Q, Ronghuang Q, Yinhuang R, et al. Trends and hotspots of family nursing research based on Web of Science: A bibliometric analysis. *Jpn J Nurs Sci* 2021:e12401. <https://doi.org/10.1111/jjns.12401>
15. van Eck NJ, Waltman L. Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics* 2010;84:523-38. <https://doi.org/10.1007/s11192-009-0146-3> PMID:20585380 PMCID:PMC2883932
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19. Djulbegovic B, Guyatt G. EBM and the theory of knowledge. In: Guyatt G, Meade M, Cook D, editors. *Users' Guides to the Medical Literature: A Manual for Evidence-Based Clinical Practice*. Boston: McGraw-Hill; 2014.
20. Djulbegovic B, Guyatt G. Evidence-based medicine in times of crisis. *J Clin Epidemiol* 2020;126:164-6. <https://doi.org/10.1016/j.jclinepi.2020.07.002> PMID:32659364 PMCID:PMC7348606
21. Rice TW, Janz DR. In Defense of Evidence-based Medicine for the Treatment of COVID-19 Acute Respiratory Distress Syndrome. *Ann Am Thorac Soc* 2020;17:787-9. <https://doi.org/10.1513/AnnalsATS.202004-325IP> PMID:32320268 PMCID:PMC7328187

## SUPPLEMENTARY DATA

**Supplementary Table 1.** Top 100 most cited publications in EBM research

| Ranking | References   | LCS | LCS/t | GCS  | GCS/t  |
|---------|--|-----|-------|------|--------|
| 1       | Sackett DL, Rosenberg WMC, Gray JAM, Haynes RB, Richardson WS. Evidence based medicine: What it is and what it isn't - It's about integrating individual clinical expertise and the best external evidence. <i>British Medical Journal</i> . 1996 JAN 13; 312 (7023): 71-72.   | 33  | 1.38  | 7078 | 294.92 |
| 2       | Guyatt G. Evidence-based medicine - a new approach to teaching the practice of medicine. <i>JAMA-Journal Of The American Medical Association</i> . 1992 NOV 4; 268 (17): 2420-2425.  | 28  | 1.00  | 2399 | 85.68  |
| 3       | Lau J, Ioannidis JPA, Terrin N, Schmid CH, Olkin I. Evidence based medicine - The case of the misleading funnel plot. <i>BMJ-British Medical Journal</i> . 2006 SEP 16; 333 (7568): 597-600.   | 0   | 0.00  | 789  | 56.36  |
| 4       | Bates DW, Kuperman GJ, Wang S, Gandhi T, Kittler A, et al. Ten commandments for effective clinical decision support: Making the practice of evidence-based medicine a reality. <i>Journal Of The American Medical Informatics Association</i> . 2003 NOV-DEC; 10 (6): 523-530.   | 0   | 0.00  | 743  | 43.71  |
| 5       | Greenhalgh T, Howick J, Maskrey N. ESSAY Evidence based medicine: a movement in crisis? <i>BMJ-British Medical Journal</i> . 2014 JUN 13; 348: Art. No. g3725.   | 0   | 0.00  | 722  | 120.33 |
| 6       | Horlocker TT, Wedel DJ, Rowlingson JC, Enneking FK, Kopp SL, et al. Regional Anesthesia in the Patient Receiving Antithrombotic or Thrombolytic Therapy American Society of Regional Anesthesia and Pain Medicine Evidence-Based Guidelines (Third Edition). <i>Regional Anesthesia And Pain Medicine</i> . 2010 JAN-FEB; 35 (1): 64-101 | 1   | 0.10  | 662  | 66.20  |
| 7       | Rosenberg W, Donald A. Evidence based medicine - an approach to clinical problem-solving. <i>BMJ-BRITISH MEDICAL JOURNAL</i> . 1995 APR 29; 310 (6987): 1122-1126.   | 6   | 0.24  | 613  | 24.52  |
| 8       | Burns PB, Rohrich RJ, Chung KC. The Levels of Evidence and Their Role in Evidence-Based Medicine. <i>Plastic And Reconstructive Surgery</i> . 2011 JUL; 128 (1): 305-310.  | 0   | 0.00  | 509  | 56.56  |
| 9       | Seppi K, Weintraub D, Coelho M, Perez-Lloret S, Fox SH, et al. The Movement Disorder Society Evidence-Based Medicine Review Update: Treatments for the Non-Motor Symptoms of Parkinson's Disease. <i>Movement Disorders</i> . 2011 OCT; 26: S42-S80  | 1   | 0.11  | 491  | 54.56  |
| 10      | McColl A, Smith H, White P, Field J. General practitioners' perceptions of the route to evidence based medicine: a questionnaire survey. <i>British Medical Journal</i> . 1998 JAN 31; 316 (7128): 361-365.  | 4   | 0.18  | 485  | 22.05  |
| 11      | Guyatt GH, Haynes RB, Jaeschke RZ, Cook DJ, Green L, et al. Users' Guides to The Medical Literature - XXV. Evidence-based medicine: Principles for applying the Users' Guides to patient care <i>JAMA-Journal Of The American Medical Association</i> . 2000 SEP 13; 284 (10): 1290-1296.  | 4   | 0.20  | 464  | 23.20  |
| 12      | Manchikanti L, Benyamin R, Helm S, Hirsch JA. Evidence-Based Medicine, Systematic Reviews, and Guidelines in Interventional Pain Management: Part 3: Systematic Reviews and Meta-Analyses of Randomized Trials. <i>Pain Physician</i> . 2009 JAN-FEB; 12 (1): 35-72.   | 0   | 0.00  | 437  | 39.73  |
| 13      | Naylor CD. Grey zones of clinical-practice - some limits to evidence-based medicine. <i>Lancet</i> . 1995 APR 1; 345 (8953): 840-842.  | 7   | 0.28  | 434  | 17.36  |
| 14      | Feinstein AR, Horwitz RI. Problems in the "evidence" of "evidence-based medicine". <i>American Journal Of Medicine</i> . 1997 DEC; 103 (6): 529-535.   | 1   | 0.04  | 414  | 18.00  |
| 15      | Coomarasamy A, Khan KS. What is the evidence that postgraduate teaching in evidence based medicine changes anything? A systematic review. <i>BMJ-British Medical Journal</i> . 2004 OCT 30; 329 (7473): 1017-1019.   | 0   | 0.00  | 385  | 24.06  |
| 16      | Bensing J. Bridging the gap. The separate worlds of evidence-based medicine and patient-centered medicine. <i>Patient Education And Counseling</i> . 2000 JAN; 39 (1): 17-25.  | 1   | 0.05  | 384  | 19.20  |
| 17      | Compton SN, March JS, Brent D, Albano AM, Weersing VR, et al. Cognitive-behavioral psychotherapy for anxiety and depressive disorders in children and adolescents: An evidence-based medicine review. <i>Journal Of The American Academy Of Child And Adolescent Psychiatry</i> . 2004 AUG; 43 (8): 930-959.                             | 0   | 0.00  | 350  | 21.88  |
| 18      | Fox SH, Katzenschlager R, Lim SY, Ravina B, Seppi K, et al. The Movement Disorder Society Evidence-Based Medicine Review Update: Treatments for the Motor Symptoms of Parkinson's Disease. <i>Movement Disorders</i> . 2011 OCT; 26: S2-S41  | 2   | 0.22  | 340  | 37.78  |
| 19      | Davidoff F, Haynes B, Sackett D, Smith R. Evidence based medicine. <i>British Medical Journal</i> . 1995 APR 29; 310 (6987): 1085-1086.  | 5   | 0.20  | 339  | 13.56  |
| 20      | McGinn T, Wyer PC, Newman TB, Keitz S, Leipzig R, et al. Tips for learners of evidence-based medicine: 3. Measures of observer variability (kappa statistic). <i>Canadian Medical Association Journal</i> . 2004 NOV 23; 171 (11): 1369-1373.  | 0   | 0.00  | 337  | 21.06  |
| 21      | Leape LL, Berwick DM, Bates DW. What practices will most improve safety? Evidence-based medicine meets patient safety. <i>JAMA-Journal Of The American Medical Association</i> . 2002 JUL 24; 288 (4): 501-507.  | 1   | 0.06  | 323  | 17.94  |
| 22      | Ellis J, Mulligan I, Rowe J, Sackett DL. Inpatient general medicine is evidence based. <i>Lancet</i> . 1995 AUG 12; 346 (8972): 407-410  | 10  | 0.40  | 320  | 12.80  |
| 23      | Sim I, Gorman P, Greenes RA, Haynes RB, Kaplan B, et al. Clinical decision support systems for the practice of evidence-based medicine. <i>Journal Of The American Medical Informatics Association</i> . 2001 NOV-DEC; 8 (6): 527-534.   | 0   | 0.00  | 297  | 15.63  |
| 24      | Kravitz RL, Duan NH, Braslow J. Evidence-based medicine, heterogeneity of treatment effects, and the trouble with averages. <i>Milbank Quarterly</i> . 2004; 82 (4): 661-687.  | 1   | 0.06  | 292  | 18.25  |
| 25      | Hyman DJ, Pavlik VN. Self-reported hypertension treatment practices among primary care physicians - Blood pressure thresholds, drug choices, and the role of guidelines and evidence-based medicine. <i>Archives Of Internal Medicine</i> . 2000 AUG 14; 160 (15): 2281-2286.  | 0   | 0.00  | 283  | 14.15  |

LCS: Local citation score, LCS/t: Local citation score per year, GCS: Global citation score, GCS/t: Global citation score per year



| Ranking | References   | LCS | LCS/t | GCS | GCS/t |
|---------|--|-----|-------|-----|-------|
| 27      | Davidson KW, Goldstein M, Kaplan RM, Kaufmann PG, Knatterud GL, et al. Evidence-based behavioral medicine: What is it and how do we achieve it? <i>Annals Of Behavioral Medicine</i> . 2003 DEC; 26 (3): 161-171.  | 0   | 0.00  | 267 | 15.71 |
| 28      | Green J, Britten N. Qualitative research and evidence based medicine. <i>BMJ-British Medical Journal</i> . 1998 APR 18; 316 (7139): 1230-1232.   | 0   | 0.00  | 260 | 11.82 |
| 29      | Sackett DL. Evidence-based medicine. <i>Seminars In Perinatology</i> . 1997 FEB; 21 (1): 3-5.  | 1   | 0.04  | 259 | 11.26 |
| 30      | Greenhalgh T. Narrative based medicine - Narrative based medicine in an evidence based world. <i>BMJ-British Medical Journal</i> . 1999 JAN 30; 318 (7179): 323-325.   | 1   | 0.05  | 255 | 12.14 |
| 31      | Fakhry SM, Trask AL, Waller MA, Watts DD. Management of brain-injured patients by an evidence-based medicine protocol improves outcomes and decreases hospital charges. <i>Journal Of Trauma-Injury Infection And Critical Care</i> . 2004 MAR; 56 (3): 492-499.   | 0   | 0.00  | 245 | 15.31 |
| 32      | McMahon CG, Althof SE, Waldinger MD, Porst H, Dean J, et al. An evidence-based definition of lifelong premature ejaculation: Report of the International Society for Sexual Medicine (ISSM) Ad Hoc Committee for the Definition of Premature Ejaculation. <i>Journal Of Sexual Medicine</i> . 2008 JUL; 5 (7): 1590-1606.  | 2   | 0.17  | 244 | 20.33 |
| 33      | Straus SE, McAlister FA. Evidence-based medicine: a commentary on common criticisms. <i>Canadian Medical Association Journal</i> . 2000 OCT 3; 163 (7): 837-841.   | 3   | 0.15  | 230 | 11.50 |
| 34      | Robinson TN, Patrick K, Eng TR, Gustafson D. An evidence-based approach to interactive health communication - A challenge to medicine in the information age. <i>JAMA- Journal Of The American Medical Association</i> . 1998 OCT 14; 280 (14): 1264-1269.   | 0   | 0.00  | 217 | 9.86  |
| 35      | Eddy DM. Evidence-based medicine: A unified approach. <i>Health Affairs</i> . 2005 JAN-FEB; 24 (1): 9-17.  | 2   | 0.13  | 214 | 14.27 |
| 36      | Raza A, Sood GK. Hepatocellular carcinoma review: Current treatment, and evidence-based medicine. <i>World Journal Of Gastroenterology</i> . 2014 APR 21; 20 (15): 4115-4127   | 0   | 0.00  | 214 | 35.67 |
| 37      | Ramos KD, Schafer S, Tracz SM. Validation of the Fresno test of competence in evidence based medicine. <i>British Medical Journal</i> . 2003 FEB 8; 326 (7384): 319-321.   | 0   | 0.00  | 207 | 12.18 |
| 38      | Serefoglu EC, McMahon CG, Waldinger MD, Althof SE, Shindel A, et al. An Evidence-Based Unified Definition of Lifelong and Acquired Premature Ejaculation: Report of the Second International Society for Sexual Medicine Ad Hoc Committee for the Definition of Premature Ejaculation. <i>Journal Of Sexual Medicine</i> . 2014 JUN; 11 (6): 1423-1441.  | 0   | 0.00  | 206 | 34.33 |
| 39      | Serefoglu EC, McMahon CG, Waldinger MD, Althof SE, Shindel A, et al. An Evidence-Based Unified Definition of Lifelong and Acquired Premature Ejaculation: Report of the Second International Society for Sexual Medicine Ad Hoc Committee for the Definition of Premature Ejaculation. <i>Sexual Medicine</i> . 2014 JUN; 2 (2): 41-59.  | 0   | 0.00  | 206 | 34.33 |
| 40      | Tonelli MR. The philosophical limits of evidence-based medicine. <i>Academic Medicine</i> . 1998 DEC; 73 (12): 1234-1240.  | 1   | 0.05  | 203 | 9.23  |
| 41      | Goldenberg MJ. On evidence and evidence-based medicine: Lessons from the philosophy of science. <i>Social Science &amp; Medicine</i> . 2006 JUN; 62 (11): 2621-2632.   | 0   | 0.00  | 199 | 14.21 |
| 42      | Fritsche L, Greenhalgh T, Falck-Ytter Y, Neumayer HH, Kunz R. Do short courses in evidence based medicine improve knowledge and skills? Validation of Berlin questionnaire and before and after study of courses in evidence based medicine. <i>BMJ-British Medical Journal</i> . 2002 DEC 7; 325 (7376): 1338-1341.   | 0   | 0.00  | 197 | 10.94 |
| 43      | Mykhalovskiy E, Weir L. The problem of evidence-based medicine: directions for social science. <i>Social Science &amp; Medicine</i> . 2004 SEP; 59 (5): 1059-1069  | 0   | 0.00  | 194 | 12.13 |
| 44      | Bridwell KH, Glassman S, Horton W, Shaffrey C, Schwab F, et al. Does Treatment (Nonoperative and Operative) Improve the Two-Year Quality of Life in Patients With Adult Symptomatic Lumbar Scoliosis A Prospective Multicenter Evidence-Based Medicine Study. <i>Spine</i> . 2009 SEP 15; 34 (20): 2171-2178.  | 0   | 0.00  | 192 | 17.45 |
| 45      | Johnson PI, Sutton P, Atchley DS, Koustas E, Lam J, et al. The Navigation Guide-Evidence-Based Medicine Meets Environmental Health: Systematic Review of Human Evidence for PFOA Effects on Fetal Growth. <i>Environmental Health Perspectives</i> . 2014 OCT; 122 (10): 1028-1039.  | 0   | 0.00  | 186 | 31.00 |
| 46      | England JD, Gronseth GS, Franklin G, Carter GT, Kinsella LJ, et al. Practice Parameter: Evaluation of distal symmetric polyneuropathy: Role of autonomic testing, nerve biopsy, and skin biopsy (an evidence-based review) Report of the American Academy of Neurology, American Association of Neuromuscular and Electrodiagnostic Medicine, and American Academy of Physical Medicine and Rehabilitation. <i>Neurology</i> . 2009 JAN 13; 72 (2): 177-184. | 0   | 0.00  | 182 | 16.55 |
| 47      | Norman GR, Shannon SI. Effectiveness of instruction in critical appraisal (evidence-based medicine) skills: a critical appraisal. <i>Canadian Medical Association Journal</i> . 1998 JAN 27; 158 (2): 177-181.   | 6   | 0.27  | 180 | 8.18  |
| 48      | Djulbegovic B, Guyatt GH. Progress in evidence-based medicine: a quarter century on. <i>Lancet</i> . 2017 JUL 22; 390 (10092): 415-423.  | 0   | 0.00  | 173 | 57.67 |
| 49      | Horlocker TT, Vandermeulen E, Kopp SL, Gogarten W, Leffert LR, et al. Regional Anesthesia in the Patient Receiving Antithrombotic or Thrombolytic Therapy: American Society of Regional Anesthesia and Pain Medicine Evidence-Based Guidelines (Fourth Edition). <i>Regional Anesthesia And Pain Medicine</i> . 2018 APR; 43 (3): 263-309.   | 0   | 0.00  | 170 | 85.00 |
| 50      | Bouillon R, Van Schoor NM, Gielen E, Boonen S, Mathieu C, et al. Optimal Vitamin D Status: A Critical Analysis on the Basis of Evidence-Based Medicine. <i>Journal Of Clinical Endocrinology &amp; Metabolism</i> . 2013 AUG; 98 (8): E1283-E1304.   | 0   | 0.00  | 167 | 23.86 |
| 51      | Hoffmann TC, Montori VM, Del Mar C. The Connection Between Evidence-Based Medicine and Shared Decision Making. <i>JAMA- Journal Of The American Medical Association</i> . 2014 OCT 1; 312 (13): 1295-1296.   | 0   | 0.00  | 166 | 27.67 |
| 52      | McAlister FA, Graham I, Karr GW, Laupacis A. Evidence-based medicine and the practicing clinician. <i>Journal Of General Internal Medicine</i> . 1999 APR; 14 (4): 236-242.  | 3   | 0.14  | 164 | 7.81  |

LCS: Local citation score, LCS/t: Local citation score per year, GCS: Global citation score, GCS/t: Global citation score per year

| Ranking | References   | LCS | LCS/t | GCS | GCS/t  |
|---------|--|-----|-------|-----|--------|
| 53      | Graham DY, Lee YC, Wu MS. Rational Helicobacter pylori Therapy: Evidence-Based Medicine Rather Than Medicine-Based Evidence. <i>Clinical Gastroenterology And Hepatology</i> . 2014 FEB; 12 (2): 177.  | 0   | 0.00  | 162 | 27.00  |
| 54      | Haynes RB. What kind of evidence is it that Evidence-Based Medicine advocates want health care providers and consumers to pay attention to? <i>BMC Health Services Research</i> . 2002 MAR 6; 2: Art. No. 3.   | 0   | 0.00  | 160 | 8.89   |
| 55      | Maynard A. Evidence-based medicine: An incomplete method for informing treatment choices. <i>Lancet</i> . 1997 JAN 11; 349 (9045): 126-128.  | 3   | 0.13  | 159 | 6.91   |
| 56      | Isaacs D, Fitzgerald D. Seven alternatives to evidence based medicine. <i>British Medical Journal</i> . 1999 DEC 25; 319 (7225): 1618-1618.  | 0   | 0.00  | 154 | 7.33   |
| 57      | Armon C. An evidence-based medicine approach to the evaluation of the role of exogenous risk factors in sporadic amyotrophic lateral sclerosis. <i>Neuroepidemiology</i> . 2003 JUL-AUG; 22 (4): 217-228   | 0   | 0.00  | 149 | 8.76   |
| 58      | Montori VM, Guyatt GH. Progress in evidence-based medicine. <i>JAMA-Journal Of The American Medical Association</i> . 2008 OCT 15; 300 (15): 1814-1816.  | 2   | 0.17  | 148 | 12.33  |
| 59      | Shojania KG, Duncan BW, McDonald KM, Wachter RM. Safe but sound - Patient safety meets evidence-based medicine. <i>JAMA-Journal Of The American Medical Association</i> . 2002 JUL 24; 288 (4): 508-513.   | 0   | 0.00  | 144 | 8.00   |
| 60      | Montori VM, Brito JP, Murad MH. The Optimal Practice of Evidence-Based Medicine Incorporating Patient Preferences in Practice Guidelines. <i>JAMA-Journal Of The American Medical Association</i> . 2013 DEC 18; 310 (23): 2503-2504.  | 1   | 0.14  | 143 | 20.43  |
| 61      | Fox SH, Katzenschlager R, Lim SY, Barton B, de Bie RMA, et al.. International Parkinson and Movement Disorder Society Evidence-Based Medicine Review: Update on Treatments for the Motor Symptoms of Parkinson's Disease. <i>Movement Disorders</i> . 2018 AUG; 33 (8): 1248-1266. | 1   | 0.50  | 140 | 70.00  |
| 62      | Seppi K, Ray Chaudhuri K, Coelho M, Fox SH, Katzenschlager R, et al. Update on treatments for nonmotor symptoms of Parkinson's disease-an evidence-based medicine review. <i>Movement Disorders</i> . 2019 FEB; 34 (2): 180-198.   | 0   | 0.00  | 139 | 139.00 |
| 63      | Barratt A. Evidence Based Medicine and Shared Decision Making: The challenge of getting both evidence and preferences into health care. <i>Patient Education And Counseling</i> . 2008 DEC; 73 (3): 407-412.   | 0   | 0.00  | 136 | 11.33  |
| 64      | Knottnerus JA, Dinant GJ. Medicine based evidence, a prerequisite for evidence based medicine. <i>British Medical Journal</i> . 1997 NOV 1; 315 (7116): 1109-1110.   | 1   | 0.04  | 135 | 5.87   |
| 65      | Cohen AM, Stavri PZ, Hersh WR. A categorization and analysis of the criticisms of Evidence-Based Medicine. <i>International Journal Of Medical Informatics</i> . 2004 FEB; 73 (1): 35-43.  | 0   | 0.00  | 135 | 8.44   |
| 66      | Guyatt G, Cook D, Haynes B. Evidence based medicine has come a long way - The second decade will be as exciting as the first. <i>British Medical Journal</i> . 2004 OCT 30; 329 (7473): 990-991.   | 0   | 0.00  | 134 | 8.38   |
| 67      | Akobeng AK. Principles of evidence based medicine. <i>Archives Of Disease In Childhood</i> . 2005 AUG; 90 (8): 837-840.  | 0   | 0.00  | 134 | 8.93   |
| 68      | Cribier B, Frances C, Chosidow O. Treatment of lichen planus - An evidence-based medicine analysis of efficacy. <i>Archives Of Dermatology</i> . 1998 DEC; 134 (12): 1521-1530.  | 0   | 0.00  | 132 | 6.00   |
| 69      | Worrall J. What evidence in Evidence-Based Medicine? <i>Philosophy Of Science</i> . 2002 SEP; 69 (3): S316-S330.   | 1   | 0.06  | 132 | 7.33   |
| 70      | Hatala R, Guyatt G. Evaluating the teaching of evidence-based medicine. <i>JAMA-Journal Of The American Medical Association</i> . 2002 SEP 4; 288 (9): 1110-1112.  | 2   | 0.11  | 132 | 7.33   |
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LCS: Local citation score, LCS/t: Local citation score per year, GCS: Global citation score, GCS/t: Global citation score per year

| Ranking | References  | LCS | LCS/t | GCS | GCS/t |
|---------|---|-----|-------|-----|-------|
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