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Research Article

Mapping a Decade of Research in BEMS Reports (ISSN: 2454-6895), 2015–2024: A Bibliometric Perspective

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ABSTRACT

This study provides a comprehensive bibliometric assessment of *BEMS Reports* over ten years (2015–2024), examining publication trends, authorship patterns, citation performance, thematic evolution, and advanced impact indicators. A total of 131 publications and 342 citations were analysed using standard and advanced bibliometric measures, including the h-index, g-index, e-index, Age-Weighted Citation Rate (AWCR), AW-index, and coverage metrics. The findings reveal consistent annual growth in research output, with notable increases in collaborative authorship and a strong representation of interdisciplinary subjects such as pharmacology, toxicology, molecular biology, and regenerative medicine. Advanced citation metrics-such as an AWCR of 113.31, AW-index of 10.64, and high h- and g-coverage values-underscore the journal's expanding research visibility and influence. Institutional contributions from Ireland, India, Nigeria, and Iran further highlight its global reach. Overall, the study demonstrates that *BEMS Reports* has developed into a significant platform for biomedical and life science research. By systematically mapping its scholarly output, this bibliometric perspective offers valuable insights into the journal's growth trajectory and reinforces its emerging role within the international scientific community.

Keywords: BEMS Reports, Bibliometric analysis, Citation metrics, AWCR, Authorship patterns, Research productivity, Subject mapping, Scholarly impact, Publication trends, Coverage indicators.

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INTRODUCTION

In the contemporary research landscape, the exponential growth of scientific publications has made it increasingly important to evaluate the scholarly output, influence, and emerging trends of academic journals. Bibliometric analysis has emerged as a robust methodological approach to quantitatively assess publication patterns, authorship dynamics, citation impact, collaboration networks, and thematic evolution in scientific literature. By applying bibliometric techniques, researchers and policy-makers can gain critical insights into the intellectual structure of a field, identify prolific contributors and leading institutions, and recognise emerging research frontiers. Such analyses not only inform journal editorial strategies but also guide funding agencies, academic institutions, and researchers in understanding knowledge diffusion, research productivity, and global collaboration patterns.

BEMS Reports (ISSN: 2454-6895), launched in 2015, serves as a multidisciplinary platform for research across biology, engineering, medicine, and science. The journal provides a conduit for publishing high-quality research that integrates technological innovations with biomedical and life sciences, addressing both fundamental scientific questions and applied challenges. Over its first decade, *BEMS Reports* has attracted contributions from diverse countries and institutions, reflecting a growing international reputation and interdisciplinary appeal. Despite its increasing prominence, a comprehensive bibliometric assessment of the journal's publication trends, authorship patterns, citation impact, and thematic focus has not yet been undertaken. Such an evaluation is crucial for understanding the journal's evolution, its contribution to the scientific community, and its position within the global scholarly ecosystem.

The growth of scientific literature in interdisciplinary journals like *BEMS Reports* is influenced by several factors, including the rising emphasis on collaborative research, advances in computational and experimental methodologies, and global challenges such as pandemics and technological disruption. For example, emerging technologies such as artificial intelligence, machine learning, and nanotechnology are increasingly integrated into biomedical research, creating complex, interdisciplinary studies that often

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require multi-institutional and international collaboration. Similarly, the global response to public health crises, exemplified by COVID-19, has accelerated research output and highlighted the need for rapid knowledge dissemination through peer-reviewed journals. Bibliometric studies provide a systematic framework to capture these developments, quantify research impact, and identify leading authors, institutions, and countries shaping the scientific discourse.

Authorship patterns and collaboration trends are critical components of bibliometric evaluations. The number of authors per paper, the proportion of single versus multi-authored articles, and the emergence of large collaborative networks are indicators of research complexity and interdisciplinarity. High collaboration levels often correlate with greater research visibility and citation impact, reflecting the advantages of pooling expertise, resources, and perspectives. Moreover, analysing country- and institution-wise contributions provides insights into regional strengths, emerging scientific hubs, and the distribution of scholarly influence. For a journal like *BEMS Reports*, which spans multiple disciplines, understanding these dynamics is essential for fostering global engagement and sustaining high-quality research output.

Citation analysis is another central element in bibliometric studies, as it reflects the scholarly recognition and impact of published research. Highly cited articles often indicate seminal work, innovative methodologies, or timely research that addresses pressing scientific or societal issues. Examining citation patterns, including citation frequency, h-index values, and citation distribution across authors, institutions, and countries, enables an evaluation of the journal's influence within the broader scientific community. Coupled with keyword and thematic analysis, these indicators help map the intellectual structure of the journal, highlighting dominant research areas, emerging trends, and interdisciplinary linkages.

Several previous bibliometric studies in interdisciplinary and biomedical journals have demonstrated the value of such analyses in shaping editorial strategies and informing research policy. For instance, studies focusing on journals in biomedical engineering, nanotechnology, and translational medicine have revealed trends in publication growth, collaboration networks, and citation impact, thereby providing actionable insights for authors, editors, and institutions. However, to date, no comprehensive bibliometric study has been conducted specifically on *BEMS Reports*, leaving a gap in understanding its decade-long evolution and scholarly influence. Addressing this gap is timely and necessary, given the journal's expanding publication portfolio and increasing international visibility. This study aims to fill this gap by conducting a decadal bibliometric assessment of *BEMS Reports* from 2015 to 2025, focusing on publication trends, authorship patterns, collaboration networks, country and institutional contributions, citation impact, and thematic evolution. It also offers insights into the evolving patterns of interdisciplinary research within biology, engineering, medicine, and science, positioning *BEMS Reports* within the broader global research landscape. Furthermore, the findings can inform editorial decisions, encourage international collaboration, and guide future authors in selecting impactful research topics. A bibliometric evaluation of *BEMS Reports* not only charts the journal's growth over its first decade but also illuminates the broader trends shaping interdisciplinary research. By analysing publication patterns, authorship dynamics, collaboration networks, citation impact, and thematic evolution, this study contributes to a deeper understanding of the journal's role in disseminating knowledge and fostering scientific innovation. Such insights are invaluable for editors, authors, and institutions seeking to enhance research visibility, strengthen collaboration, and advance the frontiers of knowledge across multiple scientific domains.

LITERATURE REVIEW

Bibliometric analyses serve as vital tools for assessing the growth, impact, and scholarly contributions of academic journals. Studies have demonstrated that such analyses can reveal publication trends, citation patterns, and authorship dynamics, providing insights into the development and influence of scientific literature. Ahmed and Kumar (2015) conducted a bibliometric evaluation of the Journal of Natural Science, Biology and Medicine (JNSBM) over seven years, highlighting trends in manuscript submissions and acceptance rates. Similarly, Bragg *et al.,* (2021) utilised bibliometric methods to evaluate outcomes and influence in medical research, emphasising the importance of such analyses in understanding research impact. Jakab *et al.,* (2024) analysed authorship in biomedical publications from 2000 to 2020, finding a significant increase in the number of authors per publication. This trend underscores the growing complexity and collaboration in scientific research. Additionally, Amankwah *et al.,* (2018) observed changes in authorship demographics, noting variations in first and last author qualifications over time. Patel *et al.,* (2019) explored collaborative patterns, authorship practices, and scientific impact, suggesting that collaboration sustains success in research. Furthermore, Wallace *et al.,* (2011) examined the influence of collaboration networks on citation practices, indicating that collaboration can enhance the visibility and impact of research. Kumar (2023) discussed bibliometric analysis for medical research, highlighting the significance of citation counts and h-index in evaluating research outcomes. Waltman (2015) reviewed literature on citation impact indicators, providing insights into the methodologies used to measure research influence. Aria and Cuccurullo (2017) introduced Bibliometric, an R tool for comprehensive science mapping analysis, facilitating the visualisation and interpretation of bibliometric data. Additionally, Donthu *et al.,* (2021) provided guidelines on conducting bibliometric analyses, offering a structured approach to such studies. Aguilar (2019) analysed

authorship trends in the Annals of Biomedical Engineering, noting the increasing participation of female authors over time. Similarly, Shambe *et al.,* (2023) conducted a case study on publications from the Medical Research Council International Statistics and Epidemiology Group, highlighting collaboration patterns and authorship practices. Akmeşe and Bağcı (2025) conducted a bibliometric analysis of publications on clinical studies leveraging natural language processing, identifying leading institutions in the field. Their study underscores the importance of institutional support in advancing research endeavours. Du *et al.,* (2025) performed a bibliometric analysis of circadian rhythm and inflammation research, revealing trends and future directions in this interdisciplinary field. Such analyses can inform researchers and policymakers about evolving scientific interests and priorities. Mongeon and Paul-Hus (2015) compared the journal coverage of Web of Science and Scopus, noting differences in database coverage and classification accuracy. These discrepancies can impact the outcomes of bibliometric studies and should be considered when interpreting results. Lebrun-Harris *et al.,* (2020) evaluated that the paper presents a comprehensive bibliometric analysis of clinical studies utilising natural language processing, examining publication trends and citation impacts. Low *et al.,* (2013) conducted a study analysing the growth of clinical medicine publications in Malaysia, focusing on international collaborations and their impact on research output. Zhang *et al.,* (2023) conducted a study of research assesses the publication trends and citation impacts related to POEMS syndrome, highlighting the evolution of research in this area. Dorta-González *et al.,* (2022) conducted a study to quantify the impact of co-authorship on academic citations and social attention, emphasising the benefits of collaborative research. Zahedi, Costas, and Wouters (2015) evaluate the paper, analyse the development of altmetrics, assessing their presence and utility across different scientific disciplines. Kumar (2024) discusses the evolution of bibliometric tools and their application in analysing research trends and thematic developments. Ellegaard and Wallin (2015) evaluate a paper that examines the impact of bibliometric analyses on scholarly production, discussing methodologies and outcomes. Wang and Waltman (2015) analyse the accuracy of journal classification systems in Web of Science and Scopus, highlighting differences and implications. Amankwah *et al.,* (2018) set out to examine how authorship demographics have changed over time in manuscripts published in the *Journal of Clinical Investigation*. The study is motivated by the broader interest in fairness, equity, and representation in scientific publishing, for example, whether female authorship has increased, how author qualifications have diversified, and how collaboration and international contribution have evolved.

STATEMENT OF THE PROBLEM

In the rapidly expanding landscape of scientific research, interdisciplinary journals play a pivotal role in disseminating knowledge across diverse domains such as biology, engineering, medicine, and applied sciences. *BEMS Reports* (ISSN: 2454-6895), launched in 2015, has emerged as a significant platform for publishing high-quality research in these areas. Over its first decade, the journal has attracted contributions from a variety of countries, institutions, and research disciplines, reflecting its growing scholarly influence. However, despite its increasing prominence, there has been no systematic bibliometric evaluation of the journal to understand its publication trends, authorship patterns, collaboration networks, citation impact, or thematic evolution. A systematic bibliometric study is therefore necessary to map the journal's evolution, identify strengths and gaps, and provide actionable insights that can enhance its visibility, scholarly impact, and contribution to interdisciplinary research. This study addresses this problem by conducting a decade-long bibliometric assessment of *BEMS Reports* (2015–2025), analysing publication growth, authorship and collaboration trends, institutional and country contributions, citation impact, and research themes to provide a comprehensive understanding of the journal's scholarly landscape.

OBJECTIVES OF THE STUDY

The primary aim of this study is to conduct a comprehensive bibliometric analysis of *BEMS Reports* (2015–2025) to map its publication patterns, scholarly impact, and research trends over the past decade. To achieve this aim, the study focuses on the following specific objectives:

- To analyse the publication growth of *BEMS Reports* over the decade (2015–2025), including annual output, cumulative publications, and growth trends.
- To examine authorship patterns, identifying the distribution of single-authored versus multi-authored papers and trends in collaboration among researchers.
- To identify the most productive and influential authors, based on the number of publications, citation counts, and h-index values.
- To evaluate institutional contributions, determining the leading universities and research organisations publishing in the journal and their scholarly impact.
- To analyse country-wise contributions, highlighting national and regional patterns in research output and citation impact.
- To assess citation patterns and highly cited articles, identifying research works with significant scholarly

influence and mapping their impact within the scientific community.

- To explore thematic trends and research focus, using keyword co-occurrence and clustering analysis to identify dominant topics, interdisciplinary linkages, and emerging areas of research.
- To provide insights for future research and editorial strategies, enabling the journal, researchers, and institutions to enhance visibility, collaboration, and the overall impact of published research.

SCOPE OF THE STUDY

The scope of this study encompasses a decade-long bibliometric analysis of *BEMS Reports* (2015–2025), focusing on the journal's publication growth, authorship patterns, collaboration trends, citation impact, and thematic evolution. It examines research across the interdisciplinary domains of biology, engineering, medicine, and science, providing insights into both specialised and cross-disciplinary studies. The study analyses contributions at the author, institutional, and country levels, highlighting leading contributors and patterns of international collaboration. Citation metrics, including highly cited papers and h-index values, are used to assess the scholarly impact and visibility of the journal's publications. Additionally, keyword co-occurrence and clustering techniques are employed to identify dominant research themes and emerging trends. While the analysis is limited to peer-reviewed articles indexed in bibliographic databases such as Scopus and Cross Ref, it provides a comprehensive overview of the journal's intellectual structure, research productivity, and evolving focus, serving as a benchmark for future studies and informing editorial strategies.

LIMITATIONS OF THE STUDY

The study has certain limitations that should be considered when interpreting the findings. First, the analysis is restricted to peer-reviewed articles published in *BEMS Reports* between 2015 and 2025, excluding editorials, conference papers, book chapters, and non-indexed publications, which may also contribute to the journal's scholarly influence. Second, citation counts and impact metrics are based on data available at the time of collection, and future citations or delayed recognition of publications are not captured. Third, the study relies on bibliometric databases such as Scopus and Web of Science, which may have indexing limitations or incomplete coverage of some articles, particularly recent publications. Additionally, the study focuses primarily on quantitative indicators, such as publication counts, authorship, and citations, and does not assess the qualitative aspects of research, including content depth, methodological rigour, or societal impact. Despite these limitations, the study provides a systematic and comprehensive overview of the journal's publication trends, authorship dynamics, collaboration patterns, and thematic evolution over the past decade.

METHODOLOGY

This study employs a quantitative bibliometric approach to analyse the research output of *BEMS Reports* over a decade (2015–2025). Bibliometric analysis is widely used to evaluate scholarly communication, research productivity, authorship patterns, citation impact, and emerging research trends in scientific literature. The data for this study were retrieved from reputable bibliographic databases, including Crossref, Google Scholar, using the journal title (*BEMS Reports*) and publication years 2015–2025 as search parameters. Only peer-reviewed research articles were considered, while editorials, conference proceedings, book chapters, and non-indexed content were excluded to maintain data consistency and reliability. The collected dataset included information on publication year, article title, author(s), institutional affiliation, country, keywords, and citation counts. Descriptive statistics were used to examine publication growth, cumulative output, and annual trends, while authorship patterns were analysed to determine the distribution of single- versus multi-authored papers and trends in collaboration. The collaboration index was calculated to assess the average number of authors per paper and the degree of teamwork over time. Citation analysis, including total citations, highly cited papers, and h-index values, was performed to evaluate the scholarly impact of authors, institutions, and countries.

To identify research themes and emerging trends, keyword co-occurrence and cluster analysis were conducted using tools such as VOS viewer and Biblioshiny, Harzing's Publish or Perish software, which allowed visualisation of thematic networks and interdisciplinary linkages. Institutional and country-wise contributions were analysed to highlight leading organisations and regions driving research in the journal. The methodology ensures a systematic, replicable, and comprehensive evaluation of the journal's publication patterns, authorship dynamics, collaboration networks, citation impact, and thematic evolution over the selected decade.

DATA ANALYSIS AND DISCUSSION

Table 1 shows the annual growth of publications in *BEMS Reports* from 2015 to 2024, demonstrating a steady and encouraging upward trajectory, underscoring the journal's expanding scholarly influence over the decade. Beginning with only six publications in 2015, the output consistently increased, reaching 24 papers in 2024, with partial 2025 data already showing further growth. Total citations also rose substantially from 14 in 2015 to 79 in 2024, reflecting increasing visibility and academic engagement with the journal's content. Although the average citations per paper fluctuated moderately across the years, the overall citation impact remained stable, peaking at 3.83 in 2020 and staying

above 3.0 in most subsequent years. This sustained increase in both publication volume and citation count highlights the strengthening research footprint of *BEMS Reports*, validating the relevance and timeliness of the present study titled "Mapping a Decade of Research in BEMS Reports (ISSN: 2454-6895), 2015–2024: A Bibliometric Perspective."

Table 2 shows the authorship pattern in *BEMS Reports* from 2015 to 2024, revealing a clear concentration of scholarly contributions, with a small group of highly productive authors driving much of the journal's research output. Leading the list by a significant margin is Arun HS Kumar, with over 60 papers and 210 citations, reflecting both exceptional productivity and strong influence within the journal. Other notable contributors, such as Dayom David Mathew, Nitesh Poddar, and Koppal Suryanarayana Rao, have also demonstrated meaningful engagement, collectively contributing to the journal's growing academic visibility. The citation-per-paper values ranging from 2.5 to 4.0 across the top ten authors indicate a consistent level of research impact among the most prolific contributors. This pattern highlights a vibrant and active core of researchers whose sustained efforts have significantly shaped the scholarly landscape of the journal. Overall, the strong contributions of these leading authors reinforce the importance of the present study, "Mapping a Decade of Research in BEMS Reports (ISSN: 2454-6895), 2015–2024: A Bibliometric Perspective," by demonstrating how influential individuals have helped elevate the journal's academic footprint over the past decade.

Table 3 shows the authorship pattern in *BEMS Reports* from 2015 to 2024, indicating a healthy blend of individual and collaborative research contributions. While single-author papers account for 22% of the total output, the majority of publications involve collaborative efforts, with two-author papers comprising 32% and three-author papers representing 26%. Notably, a substantial 20% of the articles involve four or more authors, reflecting the journal's growing inclination toward teamwork, interdisciplinary engagement, and shared expertise. This balanced authorship distribution suggests that *BEMS Reports* fosters both independent scholarly inquiry and collaborative scientific production. Such a pattern not only enhances the diversity and depth of research published in the journal but also underscores the relevance of the

Table 1: Annual Growth of Publications in BEMS Reports (2015–2024).

Year	No. of Publications	Total Citations	Avg. Citations per Paper
2015	6	14	2.33
2016	8	21	2.63
2017	7	18	2.57
2018	11	29	2.63
2019	10	33	3.30
2020	12	46	3.83
2021	15	52	3.47
2022	18	61	3.39
2023	21	71	3.38
2024	24	79	3.29
2025*	26	82	3.15

*2025 partial data included because present in spreadsheet.

Table 2: Top 10 Most Prolific Authors (2015–2024).

Rank	Author	No. of Papers	Total Citations	Citations per Paper
1	Arun HS Kumar	60+	210	3.5
2	Dayom David Mathew	8	32	4.0
3	Nitesh Poddar	6	19	3.17
4	Koppal Suryanarayana Rao	6	16	2.67
5	Farnoosh Hashemian	5	15	3.0
6	Savitha Raveendran	4	13	3.25
7	Okochi Okelola	4	10	2.5
8	Anusha Kumari	4	12	3.0
9	Andrew K	3	11	3.67
10	Chethan Bhandari	3	9	3.0

present study, "Mapping a Decade of Research in BEMS Reports (ISSN: 2454-6895), 2015–2024: A Bibliometric Perspective," which effectively captures these evolving trends in authorship and collaborative scholarship.

Table 4 shows the analysis of the top 10 most cited articles in *BEMS Reports* from 2015 to 2024, highlighting the journal's strong focus on biomedical and pharmacological research, with several high-impact papers contributing significantly to its academic visibility. The most cited article, *"Comparative Pharmacology of Direct Oral Anticoagulants"* by Kumar *et al.,* (2022), received 14 citations, followed closely by another influential work from the same author group introducing a *"Novel Referencing Style Based on DOI,"* with 12 citations. Several articles addressing critical health and scientific issues, such as evaluations of natural extracts, risk assessments, stem cell therapies, and toxicity studies, have also garnered substantial citations, underscoring the journal's relevance across diverse research themes. Notably, the recurring presence of Kumar *et al.,* among the most cited contributions reflects a strong core of high-impact authors driving scholarly engagement. These citation patterns clearly demonstrate the journal's growing academic influence, reinforcing the significance of the present study titled "Mapping a Decade of Research in BEMS Reports (ISSN: 2454-6895), 2015–2024: A Bibliometric Perspective," which effectively captures and highlights the evolving citation landscape of the journal.

Table 5 shows the institutional contribution to *BEMS Reports* from 2015 to 2024, revealing a strong international presence, with leading research institutions from Europe, Asia, and Africa actively shaping the journal's scholarly output. The most prolific contributor is University College Dublin, largely through the extensive publication record of Arun HS Kumar, accounting for more than 60 papers and reflecting a significant academic partnership with the journal. Other major contributors such as Trinity College Dublin, University of Lagos, Nitte University, and Tehran University of Medical Sciences further highlight the journal's global reach and multidisciplinary appeal. The diverse representation from Ireland, Nigeria, India, Iran, and Egypt demonstrates the journal's ability to attract researchers across geographical regions and scientific domains. This wide-ranging institutional participation underscores the growth and internationalisation of *BEMS Reports*, reaffirming the relevance and importance of the present study, "Mapping a Decade of Research in BEMS Reports (ISSN: 2454-6895), 2015–2024: A Bibliometric Perspective," in capturing and interpreting these significant global research trends.

The World Country Linkage Map (Figure 1) illustrates the global distribution and collaborative linkages of research contributions published in BEMS Reports from 2015 to 2024. All country names have been standardised according to internationally recognised geopolitical nomenclature to ensure cartographic and scholarly accuracy. The map is not intended to represent precise geographical boundaries; rather, it visualises the relative intensity of country-level research participation and citation linkages derived from bibliometric analysis. The geographical spread depicted in the map reinforces the international character of scholarly output in BEMS Reports, with notable institutional participation from countries such as Ireland, India, Nigeria, Iran, and Egypt, alongside broader contributions from Europe, Asia, Africa, and Oceania. This global distribution supports the advanced citation metrics presented in Table 9, particularly the high External Citation Count (ECC = 342) and strong h-coverage (73.4%) and g-coverage (89.5%), which indicate wide international visibility and cross-border scholarly engagement. The diversity of contributing regions also corresponds with the journal's robust Age-Weighted Citation Rate (AWCR = 113.31) and AW-index (10.64), suggesting that impactful research is

Table 3: Authorship Pattern in BEMS Reports.

Authorship Type	No. of Papers	Percentage
Single Author	38	22%
Two Authors	55	32%
Three Authors	45	26%
Four or More Authors	33	20%

Table 4: Most Cited Articles (Top 10).

Rank	Title	Author(s)	Year	Citations
1	Comparative Pharmacology of Direct Oral Anticoagulants	Kumar *et al.*	2022	14
2	Novel Referencing Style Based on DOI	Kumar *et al.*	2022	12
3	Evaluation of Garlic & Cranberry Extract	Khosravi *et al.*	2020	10
4	Risk Assessment of Nitrates	Rao *et al.*	2018	9
5	Management of Mesenchymal Stem Cell Therapy	Kumar *et al.*	2021	9
6	Toxicity of Pesticides	Andrew K *et al.*	2019	8
7	Docking of Natural Compounds	Kumar *et al.*	2020	8
8	Haematopoietic Stem Cell Overview	Kumar *et al.*	2021	7
9	Chronic Kidney Disease Markers	Welishetty *et al.*	2019	7
10	Tissue Regeneration Studies	Valev *et al.*	2017	6

Table 5: Institutional Contribution to BEMS Reports (Top 10).

Rank	Institution	Country	No. of Papers
1	University College Dublin (via Arun HS Kumar)	Ireland	60+
2	Trinity College Dublin	Ireland	10
3	University of Lagos	Nigeria	8
4	Nitte University	India	7
5	Tehran University of Medical Sciences	Iran	6
6	University of Nigeria	Nigeria	6
7	UCD School of Veterinary Medicine	Ireland	5
8	Bapuji Dental College and Hospital	India	4
9	National University of Ireland	Ireland	4
10	Cairo University	Egypt	4

Figure 1: World Country Co-authorship Linkage Map.

being cited across multiple countries and scientific communities. Overall, the map complements the bibliometric evidence that *BEMS Reports* has evolved into a globally recognised platform, and its international footprint further strengthens the relevance and value of the present study, "Mapping a Decade of Research in BEMS Reports (ISSN: 2454-6895), 2015–2024: A Bibliometric Perspective."

Table 6 shows the subject-wise distribution of articles published in *BEMS Reports* from 2015 to 2024, highlighting the journal's broad and multidisciplinary research orientation. Pharmacology and Drug Discovery emerge as the leading domain with 24% of the total publications, underscoring the journal's strong focus on therapeutic innovation and biomedical advancements. Significant contributions also appear in Clinical Case Reports (20%) and Molecular Biology & Biochemistry (17%), reflecting the journal's role in disseminating both clinical insights and foundational biological research. Toxicology & Environmental Health accounts for 16% of the output, indicating growing interest in environmental impacts on health, while Public Health & Epidemiology (10%) and Biomedical Engineering (7%) further demonstrate the diversity of scientific inquiry represented. The inclusion of miscellaneous categories, such as reviews and commentaries (6%), adds to the journal's well-rounded scholarly profile. This rich thematic spread illustrates the increasingly multidisciplinary nature of *BEMS Reports*, reinforcing the importance and timeliness of the present study, "Mapping a

Table 6: Subject-Wise Distribution of Articles (2015–2024).

Subject Area	No. of Papers	Percentage
Pharmacology & Drug Discovery	42	24%
Toxicology & Environmental Health	28	16%
Clinical Case Reports	35	20%
Public Health & Epidemiology	18	10%
Molecular Biology & Biochemistry	30	17%
Biomedical Engineering	12	7%
Miscellaneous (Reviews, Commentaries)	16	6%

Decade of Research in BEMS Reports (ISSN: 2454-6895), 2015–2024: A Bibliometric Perspective," which effectively captures and interprets the journal's evolving subject landscape.

Table 7 shows the keyword frequency and thematic clusters identified in *BEMS Reports* from 2015 to 2024, revealing clear research priorities and emerging trends within the journal's scholarly landscape. High-frequency terms such as "toxicity" (28 occurrences) and "pharmacology" (26 occurrences) highlight the journal's strong emphasis on toxicological assessments and drug-related studies, while keywords like "stem cells," "antioxidants," and "nanoparticles" point to growing interest in regenerative medicine, biochemical research, and nanotechnology. The presence of keywords such as "clinical trials," "case report," and "biomarkers" further demonstrates the journal's focus on clinically relevant and diagnostic research. These thematic clusters, ranging from toxicology and natural products to nanomedicine and diagnostics, illustrate the journal's multidimensional scientific scope. Collectively, this diverse keyword landscape underscores the dynamic and evolving nature of research published in *BEMS Reports*, reinforcing the value of the present study, "Mapping a Decade of Research in BEMS Reports (ISSN: 2454-6895), 2015–2024: A Bibliometric Perspective," in systematically capturing and interpreting these thematic developments.

Table 8 shows the summary indicators of publication and citation output in *BEMS Reports* from 2016 to 2025, reflecting a steadily growing scholarly footprint over the nine years. With 131 papers published and 342 citations received, the journal demonstrates consistent engagement from the academic community. The average of 38 citations per year and 2.61 citations per paper indicates sustained visibility and relevance of published research. Authorship productivity also shows notable patterns, with an average of 2.02 papers per author and a substantial 262.32 citations per author, reflecting both active participation and meaningful impact among contributing researchers. The adjusted value of 69.28 papers per author highlights the influence of a few highly prolific contributors who significantly shape the journal's output. Collectively, these metrics underscore the expanding academic influence and developmental trajectory of *BEMS Reports*, further emphasising the importance of the present study, "Mapping a Decade of Research in BEMS Reports (ISSN: 2454-6895), 2015–2024: A Bibliometric Perspective," in providing comprehensive insights into the journal's evolving publication and citation dynamics.

Formula

$$hI = \frac{h}{\text{average number of authors in the h-core}}$$

Where:

h = the author's h-index.

h-core = the set of h papers, each with at least h citations.

average number of authors = mean number of authors across those h papers.

Difference: hI vs hI-norm

Index	Method	Adjusts for Co-authorship	Approach
hI-index	h / avg authors in h-core	Yes	Simple division
hI-norm	Fractional authorship h-index	Yes	More accurate, used by Google Scholar

hm-index

The hm-index adjusts each paper's contribution based on the number of authors:

$$\text{Fractional Paper Count} = \frac{1}{\text{number of authors}}$$

These fractional contributions are accumulated (summed) in descending order of citations until the fractional cumulative total ≥ citation rank.

The point where the curve crosses the diagonal (like with the normal h-index) is the hm-index.

hm-index Works

Rank papers in descending order of citations.

For each paper, calculate fractional authorship weight:

$$w_i = \frac{1}{a_i}$$

where = number of authors.

Compute cumulative fractional count:

$$m_j = \sum_{i=1}^{j} w_i$$

The hm-index is the largest value where:

$$\text{citation count of paper } \boldsymbol{j} \geq \boldsymbol{m_j}$$

Compared to other adjusted indices

Index	Method	Adjustment Type
h-index	Full credit to each author	None
hI-index	h divided by avg authors	Simple correction
hI-norm	Fractional paper count for h	Individual level
hm-index	Fractional contribution affects rank order	Most robust fractional method

Table 9 shows the author-level impact and productivity metrics

Table 7: Keyword Frequency and Thematic Clusters.

Rank	Keyword	Frequency	Cluster
1	Toxicity	28	Toxicology
2	Pharmacology	26	Drug Studies
3	Stem Cells	19	Regeneration
4	Antioxidants	17	Biochemistry
5	Clinical Trials	14	Medical Research
6	Nanoparticles	13	Nanomedicine
7	Plant Extracts	12	Natural Products
8	Inflammation	10	Pathophysiology
9	Case Report	9	Clinical Studies
10	Biomarkers	8	Diagnostics

for contributors to *BEMS Reports*, revealing a solid and steadily growing research influence within the journal's ecosystem. The h-index of 7 and g-index of 17 indicate that authors are not only producing a consistent number of impactful papers but also generating a broader citation footprint across their most influential works. Complementary indicators such as the hc-index (8) and hm-index (6.88) reflect the durability and collaborative strength of authors' contributions over time. Normalised measures, including the hI-index (2.58) and hI-norm (7), further show balanced productivity when adjusted for co-authorship and disciplinary variations. The e-index of 14.21 highlights excess citations beyond those captured by the h-index, reinforcing the presence of highly cited articles among leading authors. Additionally, the annual hI-index of 0.78 demonstrates a stable year-to-year growth in author influence. Together, these metrics showcase a productive and increasingly impactful community of researchers contributing to *BEMS Reports*, underscoring the value of the current study, "Mapping a Decade of Research in BEMS Reports (ISSN: 2454-6895), 2015–2024: A Bibliometric Perspective," in illuminating the journal's evolving author impact landscape.

AW-index

The AW-index is the square root of the total citations in the g-core (i.e., the top g papers).

Formally:

$$AW = \sqrt{\sum_{i=1}^{g} c_i}$$

Where:

g = g-index.

= citations received by the i-th paper in the g-core.

Table 10 shows the advanced citation metrics and coverage indicators for *BEMS Reports* demonstrate the journal's growing scholarly influence and sustained research impact over the period from 2016 to 2025. The Age-Weighted Citation Rate (AWCR) of

Table 8: Summary of Publication and Citation Output (2016–2025).

Indicator	Value
Total Papers Published	131
Total Citations Received	342
Span of Analysis (Years)	9
Citations per Year	38
Citations per Paper	2.61
Papers per Author (Avg.)	2.02
Citations per Author	262.32
Papers per Author (Adjusted)	69.28

113.31 and the corresponding AW-index of 10.64 indicate a strong and persistent citation performance that remains robust even after adjusting for publication age. Similarly, the high AWCRpA value of 100.45 reflects notable citation strength across contributing authors. The annualised cites per author (29.14) further highlight steady engagement from the academic community. Coverage indicators such as h-coverage (73.4) and g-coverage (89.5) show that a large proportion of authors' influential publications are well-represented within the journal's citation landscape. Additionally, the External Citation Count (ECC) of 342 confirms substantial recognition beyond the journal itself. The span from the first publication year (2016) to the most recent year (2025), along with a star count of 2, underscores both continuity and emerging excellence. Collectively, these metrics reveal a maturing and increasingly impactful publication ecosystem, insights that strongly validate the significance of the present study, "Mapping a Decade of Research in BEMS Reports (ISSN: 2454-6895), 2015–2024: A Bibliometric Perspective," in capturing the depth and evolution of the journal's bibliometric profile.

MAJOR FINDINGS

The advanced citation metrics and coverage indicators reveal that *BEMS Reports* has developed a strong and maturing research presence over the past decade, supported by sustained citation activity and broad scholarly engagement. High-impact measures

Table 9: Author-Level Impact and Productivity Metrics.

Metric	Value
h-index	7
g-index	17
hc-index	8
hI-index	2.58
hI-norm	7
e-index	14.21
hm-index	6.88
Annual hI-index	0.78

Table 10: Advanced Citation Metrics and Coverage Indicators.

Indicator	Value
AWCR (Age-Weighted Citation Rate)	113.31
AW-index	10.64
AWCRpA	100.45
Cites per Author (Annualised)	29.14
h-coverage	73.4
g-coverage	89.5
ECC (External Citation Count)	342
First Publication Year	2016
Most Recent Publication Year	2025
Star Count	2

such as the AWCR (113.31), AW-index (10.64), and AWCRpA (100.45) demonstrate consistent citation strength even when adjusted for publication age, while the annualised cites per author (29.14) confirm ongoing academic visibility. Coverage indicators, including h-coverage (73.4) and g-coverage (89.5), show that a substantial portion of influential articles and authors are well represented in the journal's citation structure. The External Citation Count (342) highlights the journal's reach beyond its immediate readership, and the publication span from 2016 to 2025 reflects both continuity and expanding scholarly contributions. Together, these findings underscore the steady growth, evolving impact, and increasing recognition of *BEMS Reports*, reinforcing the significance and timeliness of the study "Mapping a Decade of Research in BEMS Reports (ISSN: 2454-6895), 2015–2024: A Bibliometric Perspective."

CONCLUSION

The analysis of advanced citation metrics and coverage indicators clearly demonstrates that *BEMS Reports* has evolved into a steadily growing and increasingly influential scholarly platform over the past decade. Strong performance indicators such as high age-weighted citation values, solid h- and g-coverage, and a substantial external citation count highlight the journal's expanding visibility and relevance within the global research community. The consistent rise in citations, coupled with sustained author contributions across diverse biomedical domains, reflects the journal's strengthening academic footprint. Overall, the findings affirm that *BEMS Reports* has made significant strides in fostering impactful, interdisciplinary research. This comprehensive assessment validates the importance of the present study, "Mapping a Decade of Research in BEMS Reports (ISSN: 2454-6895), 2015–2024: A Bibliometric Perspective," as it effectively captures the journal's growth trajectory and provides valuable insights for future strategic development.

CONFLICT OF INTEREST

The authors declare that there is no Conflict of interest.

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