

Analysis of Scientific Production in the Cuban Journal of Intensive and Emergency Medicine

Análisis de la producción científica en la Revista Cubana de Medicina Intensiva y Emergencias

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ABSTRACT

Introduction: the Cuban magazine of Intensive Medicine and Emergencies is a scientific publication dedicated to the dissemination of research and advances in the field of critical medicine and emergencies, which promotes knowledge and medical practice.

Objective: characterize scientific production in the Cuban magazine of intensive medicine and emergencies.

Methods: a bibliometric, observational, descriptive study of cross -section between 2019 and 2023 was carried out. The universe was made up of 134 articles, the total investigation was. The variables were: year of publication, number of authors, origin of the author, type of article, bibliographic references and number of citations of the articles. The descriptive statistics and Price Index were applied.

Results: 2021 predominated, with greater number of published articles (n = 31; 23,13 %). The University of Medical Sciences of Havana, prevailed with a greater number of authors (n = 172; 35,83 %). The preponderant typology were the original articles (n = 70; 52,24 %). The review articles presented a higher Price index (0,82). Articles with five authors prevailed (n = 105; 21,88 %).

Conclusions: a boom in scientific production in 2019, at the University of Medical Sciences, is highlighted in Havana, is positioned as an active research center. There is interest in research with a predominance of original articles and clinical cases, these function as a space for debate and reflection. Scientific collaboration is a growing trend, with an increase in the number of articles with five authors.

Keywords: Bibliometry; Bibliometric indicators; Scientific production indicators; Serial publications

RESUMEN

Introducción: la Revista Cubana de Medicina Intensiva y Emergencias es una publicación científica dedicada a la divulgación de investigaciones y avances en el campo de la medicina crítica y emergencias, que promueve el conocimiento y la práctica médica.

Objetivo: caracterizar la producción científica en la Revista Cubana de Medicina Intensiva y Emergencias.

Métodos: se realizó un estudio bibliométrico, observacional, descriptivo de corte transversal entre el 2019 y 2023. El universo estuvo integrado por 134 artículos, resultaron el total de la investigación. Las variables fueron: año de publicación, cantidad de autores, procedencia del autor, tipo de artículo, referencias bibliográficas y cantidad de citaciones de los artículos. Se aplicó la estadística descriptiva e Índice de Price.

Resultados: predominó el año 2021, con mayor cantidad de artículos publicados (n=31, 23,13 %). La Universidad de Ciencias Médicas de La Habana, prevaleció con mayor cantidad de autores (n=172, 35,83 %). La tipología preponderante, fueron los Artículos Originales (n=70; 52,24 %). Los Artículos de Revisión presentaron mayor Índice de Price (0,82). Imperaron los artículos con cinco autores (n=105, 21,88 %).

Conclusiones: se destaca un auge en la producción científica en el 2019, en la Universidad de Ciencias Médicas, en La Habana, se posiciona como un centro de investigación activo. Existe interés por la investigación con predominio de Artículos Originales y los Casos Clínicos, estos funcionan como un espacio para el debate y la reflexión. La colaboración científica es una tendencia creciente, con un aumento en la cantidad de artículos con cinco autores.

Palabras clave: Bibliometría; Indicadores Bibliométricos; Indicadores De Producción Científica; Publicaciones Seriadadas

INTRODUCTION

Specialized scientific journals are fundamental pillars within the ecosystem of contemporary medical research. They act as primary channels for the dissemination of new knowledge, the critical discussion of advances, and the validation of clinical practices, especially in areas as dynamic and vitally important as Intensive Care Medicine and Emergency Medicine. ^(1,2)



In this context, periodical publications with high academic rigor emerge as indispensable tools for keeping the professional community up-to-date, influencing evidence-based healthcare decision-making, and ultimately contributing to improved health outcomes for the population. The creation and maintenance of national journals in these critical disciplines takes on particular relevance, as they offer a platform to highlight local research, address specific issues in the healthcare setting, and foster collaboration among national professionals. ^(1,2,3)

To objectively understand and evaluate the true contribution of a scientific journal to its field, bibliometric studies are presented as irreplaceable methodologies. These analyses, based on the systematic and quantitative measurement of the production and dissemination of scientific literature, allow us to unravel patterns, trends, and the impact of publications. ⁽⁴⁾

Through indicators such as productivity over time, predominant subject areas, authorship and institutional collaboration, geographical origin of works, and citation metrics, it is possible to obtain a comprehensive picture of the role a specific publication plays within the body of knowledge in its specialty. This type of research transcends mere quantitative description; it provides crucial empirical data to identify strengths, areas of opportunity, and the journal's alignment with the research and development needs of its field. ⁽⁵⁾

In the specific case of the Cuban Journal of Intensive and Emergency Medicine, a comprehensive bibliometric analysis is not only pertinent but necessary. It allows us to accurately characterize its concrete contribution to national and international scientific production in these disciplines. Understanding its evolution, the profile of the works it publishes, the institutions and authors that contribute to it, and the visibility of its content is vital information. ⁽⁶⁾

This evaluation provides a solid basis for editors, editorial boards, sponsoring institutions, and the scientific community at large to critically assess its trajectory, make informed strategic decisions for its continuous improvement, and optimize its contribution to the advancement of knowledge and clinical practice in intensive care and emergency medicine in Cuba and beyond. ⁽⁷⁾

Consequently, this work aims to characterize the scientific output of the Cuban Journal of Intensive and Emergency Medicine.

MATERIALS AND METHODS



A bibliometric, observational, descriptive, cross-sectional study was conducted on the publications of the Cuban Journal of Intensive and Emergency Medicine between 2019 and 2023.

The sample consisted of 134 scientific articles published during the period, belonging to the regular volumes (Vol.) and issues (No.). Sampling techniques were not applied, so the entire sample was used.

The variables used were: year of publication, number of authors (one to six), and author origin (all medical schools in the country and internationally were analyzed).

The following article types were analyzed: Editorial, Letter to the Editor, Original Article (which includes Short Communications, as they are original research that provides preliminary data for a scientific investigation); Review Article (which included historical articles and Case Reports); bibliographic references (number of references and references less than five years old from the date of publication of the article).

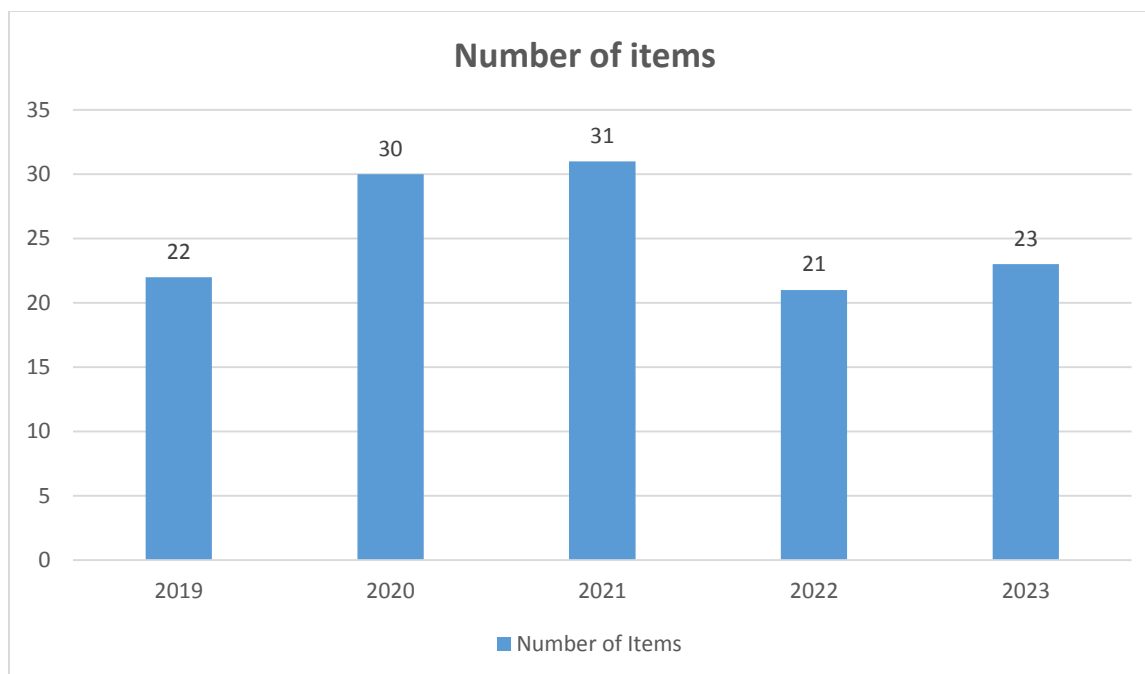
Data were collected from each article. For better analysis, they were downloaded from the journal's platform. Statistical analysis of the information was performed using absolute and percentage frequency statistics. The bibliometric indicator used was the Price index for each article type, the ratio of references less than five years from the article's publication to the total number of references for each article.

Cuban ethical standards for research in health sciences and the Second Declaration of Helsinki were observed.

RESULTS

The year 2021 predominated, with the highest number of published articles (n=31; 23,13 %), Chart 1.

Chart 1. Distribution of articles in the Cuban Journal of Intensive Medicine and Emergencies, from 2019 to 2023



Source: Cuban Journal of Intensive and Emergency Medicine

Articles with multiple authors predominated (n=109, 81,35 %). The majority of authors were from the University of Medical Sciences of Havana (n=172, 35,83 %). Foreign authors represented 22,92 % of the total, Table 1.

Table 1. Distribution of articles according to author characteristics

Distribution by authors. Number of articles n=134		
Number of authors	No.	%
Multiple authorship	109	81,35
Simple authorship	25	18,65
Distribution by center of origin. Number of authors n=480		
Centers of origin	No.	%
*UCM Havana	172	35,83
International Universities	110	22,92
UCM Villa Clara	34	7,08

UCM Pinar del Río	28	5,83
UCM Cienfuegos	27	5,63
UCM Santiago de Cuba	26	5,42
UCM Guantánamo	26	5,42
**FCM Artemisa	13	2,71
UCM Camagüey	11	2,29
UCM Holguín	10	2,08
UCM Ciego de Ávila	7	1,46
UCM Las Tunas	5	1,04
UCM Isla de la Juventud	5	1,04
UCM Granma	4	0,83
UCM Matanzas	1	0,21
FCM Mayabeque	1	0,21
TOTAL	480	100

Source: Cuban Journal of Intensive and Emergency Medicine

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Original Articles prevailed (n=70; 52,24 %), followed by Case Reports (n=30; 22,39 %). Original Articles presented a total of 1 686 references (60,30 %), while the least frequent types were Letters to the Editor and Editorials, with 65 for 2,32 % and 79 for 2,83 %, respectively. Review Articles had the highest Price index (0,82), Table 2.

Table 2. Distribution by article type and number of references

Types of Articles	No.	%	References				Price Index
			No.	%*	≤ 5 años	%**	

Original Article	70	52,24	1686	60,30	1228	57,60	0.73
Clinical Case	30	22,39	327	11,70	267	12,52	0.81
Review Article	16	11,94	639	22,85	525	24,62	0.82
Letter to the Editor	11	8,21	65	2,32	53	2,49	0.81
Editorial	7	5,22	79	2,83	59	2,77	0.75
TOTAL	134	100	2796	100	2132	100	-

Source: Cuban Journal of Intensive and Emergency Medicine.

DISCUSSION

Scientific production in the field of intensive care and emergency medicine is a fundamental pillar for clinical advancement and improved care for critically ill patients. Analyzing publication dynamics in specialized journals, such as the Cuban Journal of Intensive and Emergency Medicine, offers a valuable window into understanding the trends, strengths, and areas of opportunity within this discipline in specific contexts.

The temporal analysis reveals a notable peak in productivity in 2021, this maximum is closely followed by 2020, the high production in these two consecutive years (2020-2021) could reflect a boost in scientific research and communication directly associated with the global response to the COVID-19 pandemic, an event that placed emergency and intensive care services at the center of healthcare and research.

This pattern of increase in years of severe health crises is echoed in bibliometric studies of similar journals such as that of Ortiz Núñez et al. ⁽⁸⁾, where significant increases in publications related to emergencies and critical care were documented during the peak years of the pandemic.

It is interesting to note that production in 2022 and 2023 shows a slight decrease compared to the 2021 peak, but remains at levels comparable to or higher than those of 2019, suggesting a possible consolidation of levels of scientific activity above the immediate pre-pandemic period, although future monitoring is required to confirm this trend.

The study confirms the predominance of collaborative work in modern scientific research, evidenced by the high rate of multiple authorship, while single authorship was a minority. This preference for teams of five researchers coincides with trends observed in research conducted by Gutiérrez González et al.,⁽⁹⁾ where the complexity of clinical research often requires the integration of various specialties and skills.

Geographically, authorship shows a marked concentration at the University of Medical Sciences of Havana (UCMH). This dominance of the capital institution, although common in studies of national journals from other countries, where the capital is usually the main academic center, is significantly more pronounced than that observed in similar research where the distribution tends to be more diverse. An example of this is the studies by Aquino Canchari et al.⁽¹⁰⁾

Regarding the types of articles published, Original Articles were the predominant category; this preponderance of original research is a positive indicator of the journal's research profile and is aligned with what is expected and desirable in high-impact specialized scientific publications, as reported by Livia et al.⁽¹¹⁾. Review Articles, although less numerous, showed a high degree of bibliographic relevance, reflected in the higher Price Index, similar results are shown by Santalla Corrales et al.⁽¹²⁾

In terms of volume of references, Original Articles contributed the largest share; the low proportion of Editorials and Letters to the Editor compared to research articles could be interpreted as an area of potential growth to foster debate and more agile communication within the scientific community served by the journal, an aspect that has been highlighted as relevant in analyses such as those by Hernández et al.,⁽¹³⁾ Boris Miclin et. al.,⁽¹⁴⁾ and Salazar Rodríguez et al.⁽¹⁵⁾

The study presents limitations inherent to its methodological design. The period analyzed, between 2019 and 2023, is relatively short to establish solid long-term trends or assess the journal's complete historical evolution. Likewise, the approach was strictly quantitative, focusing on numerical indicators such as the number of authors, references, and types of articles, ignoring qualitative aspects such as the clinical relevance or methodological soundness of the published works. Although all articles published during the five-year period were analyzed, this universe, although comprehensive for the defined period, remains of moderate size, which could limit the detection of more subtle patterns or the generalization of some findings.

CONCLUSIONS

This provides a picture of an active journal, with a strong production core in the capital but with significant international connections, which prioritizes original research and displays a good level of bibliographic relevance, especially in its review articles. The patterns observed during the pandemic years highlight the responsiveness of the scientific community that publishes in it.

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STATEMENT OF AUTHORSHIP

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CJAP: conceptualization, data curation, research, methodology, supervision, validation, visualization.

RFS: conceptualization, data curation, research, methodology, supervision, validation, visualization.

LMRV: conceptualization, data curation, research, methodology, supervision, validation, visualization.

CYHR: conceptualization, data curation, research, methodology, supervision, validation, visualization.

IYMV: conceptualization, data curation, research, methodology, supervision, validation, visualization.

CONFLICTS OF INTEREST

The authors declare that there are no conflicts of interest.

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