

ORIGINAL

Characterization of the collection of university scientific journals of health sciences in Cuba

Caracterización de la colección de revistas científicas universitarias de las ciencias de la salud en Cuba

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ABSTRACT

Introduction: the existence of university scientific journals has a positive impact on undergraduate publication, encouraging and training new generations of researchers.

Objective: to characterize the collection of University Scientific Journals of Health Sciences in Cuba.

Method: observational, descriptive and transversal study in the 15 journals that form the University Scientific Journals of Health Sciences in Cuba. Production indicators were studied, as well as indexing.

Results: 15 Cuban RCUs referring to the area of Health Sciences were identified. One hundred percent are installed in Open Journal System, and only one uses its version 3. 93,33 % have an ISSN. The journals Universidad Médica Pinareña and 16 de abril achieved a greater number of indexations. The database with the highest number of journals was REDIB (9), followed by DOAJ (4) and CAB International (4). The most productive year was 2021 (ndoc=394), with the most productive journals being 16 de Abril (ndoc=304) and Universidad Médica Pinareña (ndoc=274). The rate of change showed an increasing trend in the period 2018-2021, however it was negative (Tvar=-5,21) between 2021 and 2022.

Conclusions: Cuba has a wide collection of University Scientific Journals, which are in a process of growth and consolidation. There was a tendency to increase the number of articles published in the journals. The journals Universidad Médica Pinareña and 16 de abril showed a greater development, achieving better indexing and a higher scientific production.

Keywords: Periodicals as Subject; Health Sciences; Students; Medical Students.

RESUMEN

Introducción: la existencia de revistas científicas universitarias incide de forma positiva en la publicación desde el pregrado, al incentivar y formar nuevas generaciones de investigadores.

Objetivo: caracterizar la colección de Revistas Científicas Universitarias de las Ciencias de la Salud en Cuba.

Método: estudio observacional, descriptivo y transversal en las 15 revistas que forman la Revistas Científicas Universitarias de las Ciencias de la Salud en Cuba. Se estudiaron indicadores de producción, así como las indizaciones.

Resultados: se identificaron 15 RCU cubanas referentes al área de las Ciencias de la Salud. El 100 % se encuentran instaladas en *Open Journal System*, y solo una usa su versión 3. El 93,33 % cuenta con un ISSN.

Las revistas Universidad Médica Pinareña y 16 de abril lograron un mayor número de indexaciones. La base de datos con mayor número de revistas fue REDIB (9), seguida de DOAJ (4) y CAB Internacional (4). El año más productivo fue el 2021 (ndoc=394), siendo las revistas más productivas 16 de Abril (ndoc=304) y Universidad Médica Pinareña (ndoc=274). La tasa de variación mostró una tendencia al incremento en el periodo 2018-2021, sin embargo, se mostró negativo (Tvar=-5,21) entre 2021 y 2022.

Conclusiones: Cuba posee una amplia colección de Revistas Científicas Universitarias, las cuales se muestran en proceso de crecimiento y consolidación. Existió una tendencia al aumento de artículos publicados en las revistas. Las revistas Universidad Médica Pinareña y 16 de abril mostraron un mayor desarrollo, logrando mejores indexaciones y una mayor producción científica.

Palabras clave: Publicaciones Periódicas como Asunto; Ciencias de la Salud; Estudiantes; Estudiantes de Medicina.

INTRODUCTION

The model of the Health Sciences professional is based on several fundamental axes for the correct performance of his or her social purpose, including assistance, teaching, administration and research. These allow the professional to contribute to the solution of the problems of professional practice in the environment where he/she works in a creative and transforming way, applying knowledge based on scientific evidence.⁽¹⁾

The development of research in Health Sciences constitutes a core component in the medical-healthcare system that influences the levels of health and quality of life of the population while contributing to the achievement of health standards similar to those of the developed world. The active role of the student in the construction of knowledge is recognized so that the student's scientific production favours the preparation of research methods, promotes the formation of values and encourages scientific concerns.⁽²⁾

As part of the professional training strategy of Cuban medical universities, the aim is to graduate integral professionals with a research profile according to the current times so that from the undergraduate level, students are instructed in the development of research skills. To this end, an active scientific movement is developed, with the development of research spaces such as scientific conferences, congresses, research scholarships and awards for scientific activity.⁽³⁾

The socialization of research is an indispensable element for the development of these skills; for this, there are several formats, mainly used the participation in conferences and congresses. However, publication in scientific journals has been considered the method par excellence, achieving a greater reach. Although in Cuba there is a considerable number of journals in the field of Health Sciences, these have historically presented limitations when considering publication by students, being identified by several researchers.^(4,5)

In general, and on this subject, it has been indicated that there is a scarce student scientific production, representing 11 % in Colombia and 10 % in Chile. This shows several elements, among them the need for more opportunities for many students to publish.⁽⁶⁾

In the case of Cuba, the panorama is somewhat different, although it is not exempt from some of these situations.⁽⁷⁾ From the researchers' experience, student scientific production in the health sector is quite heterogeneous. This could be due to factors such as the existence of more than 12 careers, the possibility of links through assistantships from undergraduates with more than 60 specialities, the implementation of on-the-job education in all institutions of the health network and student scientific activity as part of the curriculum.

Until 2005, there was only one journal in Cuba dedicated to the publication of the results of the students' scientific work, the journal 16 de Abril. In 2005, the journal Universidad Médica Pinareña emerged at the University of Medical Sciences of Pinar del Río; it emerged as a local journal, only visible at the university, and later in the national network; however, since 2018, it managed to be accessible internationally. The existence of these two journals set a precedent for Cuban student scientific publication.

One of the agreements of the ninth congress of the University Student Federation of Cuba resulted in the approval of the creation of university scientific journals in each Cuban Medical University.⁽⁸⁾ Thus, new spaces emerged that would channel student research to a higher state qualitatively and quantitatively.⁽⁹⁾

The editors of the RCU are undergraduate students of Health Sciences careers who develop the editorial process together with an editorial committee formed by students and professionals. These journals develop a typical editorial process, which includes reception, review and editing of articles. In addition, they are accompanied by the Provincial Centers of Medical Sciences Information of the provinces, which are in charge of the editorial production of the articles accepted for publication (style correction, translation, layout and indexing).

Several studies have analyzed the individual scientific production of these journals, highlighting bibliometric studies of the journals Universidad Médica Pinareña⁽¹⁰⁾, 16 de Abril⁽⁹⁾, and InMedSur.⁽¹¹⁾ Likewise, one study

analyzed Cuban RCUs; however, at the time of the study, there were only UMP and 16A.⁽¹²⁾

Given the inexistence of studies that analyze the current functioning of Cuban CERs, and given the need for a periodic study of the state of scientific journal collections, the present research was developed with the objective of characterizing the collection of University Scientific Journals of the Health Sciences in Cuba.

METHODS

An observational, descriptive, cross-sectional, descriptive study was carried out in the 15 Cuban University scientific journals in the field of Health Sciences between January and April 2023. The study population consisted of the 15 RCUs informed to the Student Scientific Group of the FEU of Cuba, which had an active Website and presented at least one article published at the time of the study (table 1).

The following variables were analyzed: Higher Education Institution (HEI) / Province of the journal, name of the journal, International Standard Serial Number (ISSN), web address (URL), year of creation, indexation in regional and international databases and scientific production by years.

To obtain the ISSN, the website of each journal was accessed and crossed with the ISSN website. The indexations selected for the study were selected according to the groups established by resolution 1 of 2020 of the president of the National Commission of Scientific Degrees and the databases by a group of the Ministry of Higher Education.⁽¹³⁾

For data collection, the website of each journal was accessed and the information extracted was placed in a data compilation form made for this purpose. The resulting data were deposited in a spreadsheet for subsequent cleaning and processing. Descriptive statistics were used for data analysis.

Table 1. University Scientific Journals for the publication of student scientific production

IES/Province	Name of the journal	ISSN	Web address	Year of creation
Pinar del Río	Pinareña Medical University	1990-7990	https://revgaleno.sld.cu/index.php/ump	2005
La Habana	April 16th	1729-6935	http://rev16deabril.sld.cu/index.php/16_04	2000
Mayabeque, Artemisa.	Medical Column		http://www.revcolumnamedica.sld.cu/	2022
Matanzas	Scientific Student Magazine of Medical Sciences of Matanzas	2789-7567	https://revmedest.sld.cu/index.php/medest	2021
Cienfuegos	Medical Research of the South (INMEDSUR)	2708-8456	http://www.inmedsur.cfg.sld.cu	2018
Villa Clara	Scalpelo	2791-0350	https://rescalpelo.sld.cu/index.php	2020
Ciego de Ávila	CienCiMed		https://ciencimed.sld.cu/index.php/ciencimed	2022
Sancti Espíritus	SPIMED	2788-5216	https://revspimed.sld.cu/index.php	2020
Camagüey	Progalene	2707-9139	https://revprogaleno.sld.cu/index.php/	2018
Holguín	HolCien	2708-552X	http://www.revholcien.sld.cu/index.php/	2020
Las Tunas	EsTuSalud	2790-3605	https://revestusalud.sld.cu/index.php	2019
Santiago de Cuba	UNIMED	2788-5577	https://revunimed.sld.cu/index.php/revestud	2019
Guantánamo	Student Medical Gazette	2708-5546	https://revgacetaestudiantil.sld.cu/index.php	2020
Granma	Student scientific journal December 2	2788-6786	https://revdosdic.sld.cu/index.php/revdosdic	2018
Latin American School of Medicine	Science & conscience.	2790-3575	http://www.revcienciaconciencia.sld.cu	2018

Source: Vitón-Castillo, AA. *et al*, 2023.

RESULTS

Fifteen Cuban RCUs referring to the area of Health Sciences were identified. Of these, only one is in its provincial centre (INMEDSUR), and the rest are in INFORMED Cuba servers.

Regarding the OJS version, only Gaceta Médica Estudiantil (Universidad *et al.*) has OJS 3, and the rest use version 2.4.8. Currently, 93,33 % have an ISSN, and only one is in the process of ISSN management.

With respect to indexing, the journals Universidad Médica Pinareña and 16 de Abril achieved a higher number. The database with the highest number of journals was REDIB⁽⁹⁾, followed by DOAJ⁽⁴⁾ and CAB International.⁽⁴⁾

The most productive year was 2021 (ndoc=394), followed by 2020 (ndoc=376). The most productive journals were 16A (ndoc=304) and UMP (ndoc=274). Only one journal, Scalpelo, did not publish articles in 2022 (table 3).

Table 2. Indexing achieved by Cuban University Scientific Journals in Health

Magazine	CAB International	DOAJ	Redalyc	AmeliCA	Latindex	Latindex 2.0	Biblat (CLASS-PERIODIC)	REDIB	EBSCO	DIALNET	ERIHPlus
UMP	X	X	X		X	X	X	X	X	X	X
16A	X	X			X		X	X	X		X
CM											
MedEst											
INMEDSUR								X			
Scalpelo											
CienCiMed											
SPIMED		X						X			
Progaleno											
HolCien								X			
EsTuSalud								X			
UNIMED								X			
GME	X			X		X		X	X		
2Dic	X	X						X		X	X
C&C											
Total	4	4	1	1	2	2	2	9	3	2	3

Legend: Pinareña Medical University (UMP), April 16 (16A), Medical Column (CM), Student Scientific Magazine of Medical Sciences of Matanzas (MedEst), Southern Medical Research (INMEDSUR), Student Medical Gazette (GME), Student scientific magazine December 2 (Dec 2), Science & conscience.

Tabla 3. Scientific production by year and journal

Magazine	2018	2019	2020	2021	2022	Total
UMP	37	59	64	60	54	274
16A	52	31	68	95	58	304
CM	-	-	-	-	12	12
MedEst	-	-	-	16	18	34
INMEDSUR	12	19	36	24	30	121
Scalpelo	-	-	18	10	0	28
CienCiMed	-	-	-	-	5	5
SPIMED	-	-	22	14	18	54
Progaleno	15	23	18	24	18	98
HolCien	-	-	17	25	20	62
EsTuSalud	-	10	26	24	26	86
UNIMED	-	12	35	38	17	102
GME	-	-	31	21	21	73
2Dic	14	13	27	32	47	133
C&C	14	11	14	11	11	61
Total	144	178	376	394	355	1447

Figure 1 shows the number of articles and journals per year, as well as the variation rate of the number of articles. The variation rate showed an increasing trend in the period 2018-2021, corresponding to the increase in the number of journals. However, it showed negative (Tvar=-5,21) between 2021 and 2022.

DISCUSSION

Cuban University Scientific Journals, since their emergence, are governed by the organization of the Open Journal System as a form of editorial management. The editorial teams are mainly composed of students with high research development, who are tutored by professors and external advisors who contribute to achieving a process of excellence.⁽¹⁴⁾

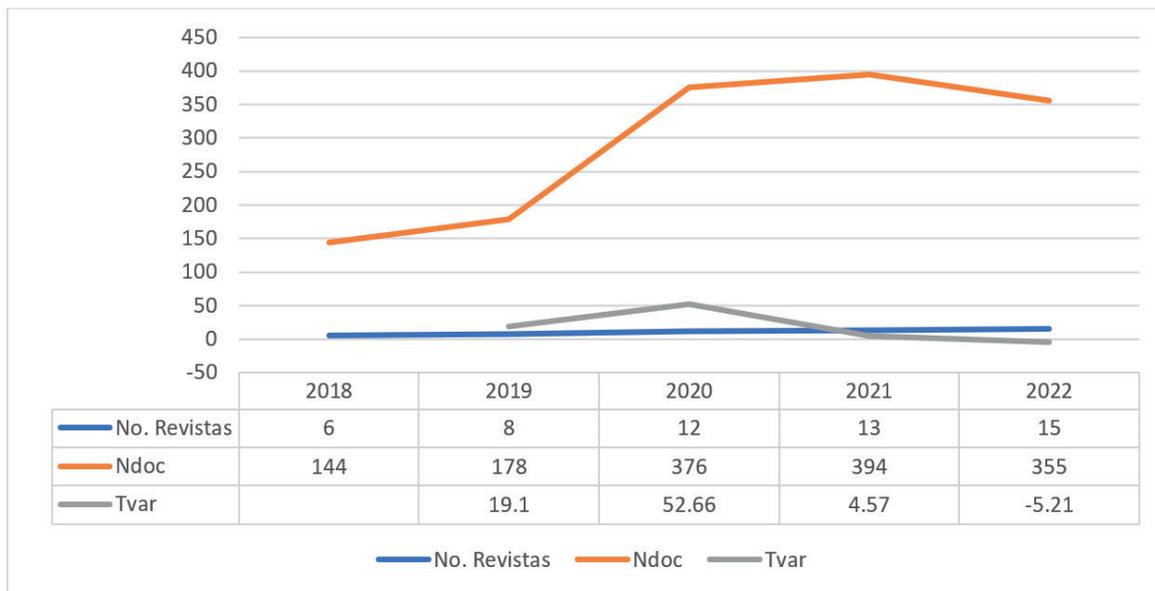


Figure 1. Number of journals and articles per year

The results of the present study indicate the notable heterogeneity existing among the different organs of student dissemination in Cuba, appreciable in factors such as the year of their emergence, indexing, and website, among others.

In this sense, the authors consider the decision to create the Student Scientific Journals as a means of dissemination of the Cuban undergraduate production during the IX Congress of the University Student Federation. The different scenarios in which they arose favour such diversity, be it the strategies of the educational centres for their creation, the level of preparation of the editorial teams and the human factor given by the commitment and interest of the editorial teams in promoting the journals.

The lack of the ISSN periodical publication identifier may be the result of poor management of the editorial team as well as internal obstacles to the emergence of a student journal; either of the two variants is a marker of the existing gap despite the efforts of some in the face of scientific development from the undergraduate level. Likewise, given that this depends on the national and regional centres designated to grant them, the institutions must play a more significant role in their management.

The indexing of a journal has been considered as a reflection of the quality of both the editorial management and the science it publishes. To achieve indexing, journals must meet different criteria of quality, visibility, impact and editorial standards, which vary depending on the database. These may include the scientific grades of the editorial board, annual scientific production, internationalization of the editorial board and the authors publishing in the journal, rejection rate, languages of publication, citations in the database, or others.

The entry in a database supports the visibility process of the journal, as it is distributed in more information systems. In addition, they assign a position in certain groups, thus attracting the attention of authors who need publications in journals with a certain indexing.

The fact that only 4 of the 15 Cuban Student Scientific Journals present 5 or more indexing may be an indicator of the need to intensify the preparation of their editorial teams, generate visibility and impact strategies and improve editorial policies.

Student scientific societies are a research experience strategy that allows students to become involved in research. They can develop their activities during the academic year and even take advantage of breaks to continue their activities. These groups ferment not only research but also the publication of the results of projects carried out within them. They also provide the experience of a tutor who can pave the way for the publication of a paper with his or her knowledge.⁽¹⁵⁾

Some Latin American studies indicate that, although students are motivated to do research, only some go on to present their work at conferences or publish it in indexed journals. For a university, the formation of researchers is a crucial process, where the teacher-student relationship is organized around the search for knowledge based on scientific methodologies at the undergraduate level.⁽⁶⁾

In their study on Scientific Production in Latin America and the Caribbean in the period 1996 - 2019, available in Scopus, they point out that Cuba presents an availability of 39,796 documents, with an average number of citations per document of 8,66 at the date of the research, there were 26 journals indexed in Scopus and the scientific discipline that most disseminate is health.⁽¹⁶⁾

This shows the potential of professional Cuban science, which in turn needs to be reflected in student

publication, requiring a more significant effort and joint work between institutions and universities. To this end, new forms of study culmination and new incentives should be created to motivate students to research and publish.

An analysis of production in Latin American student journals from 2013 to 2016 found a more significant number of original papers in English. Manuscripts were published from 39 countries, with Chile (101), the United States (31) and Peru (30).⁽¹⁷⁾

When comparing these results with those of the present study, it can be assumed that Cuban student scientific production exceeds such production. However, the marked differences between the two studies should be taken into account. Opening gaps to new lines, the authors consider necessary the realization of an analysis of the student scientific production valuing documents in a more current time interval.

Scientific research training in the medical career is an intentional and permanent process that is developed in the systematization of competencies as transforming potentialities in the spheres of professional performance, aimed at providing pertinent solutions to health problems through scientific research.

CONCLUSIONS

Cuba has a vast collection of University Scientific Journals, which are in a process of growth and consolidation. There was a tendency to increase the number of articles published in the journals. The journals Universidad Médica Pinareña and 16 de Abril showed a more significant development, achieving better indexing and a more excellent scientific production.

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CONFLICTS OF INTEREST

None.

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None.

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