



## RESEARCH ARTICLE

**REVISED** **Bibliometric analysis of scientific production on university social responsibility in Latin America and the Caribbean [version 2; peer review: 2 approved]**Diego Urrunaga-Pastor <sup>1,2</sup>, Guido Bendezu-Quispe<sup>3</sup>, Deici Dávila-Altamirano<sup>2</sup>, Milagritos N. Asmat<sup>2</sup>, Jordi Grau-Monge<sup>2</sup><sup>1</sup>Grupo de Bibliometría, Evaluación de Evidencia y Revisiones Sistemáticas (BEERS), Universidad Científica del Sur, Lima, Peru<sup>2</sup>Unidad de Responsabilidad Social Universitaria, Facultad de Ciencias de la Salud, Universidad Científica del Sur, Lima, Peru<sup>3</sup>Centro de Investigación Epidemiológica en Salud Global, Universidad Privada Norbert Wiener, Lima, Peru**V2** **First published:** 16 Oct 2023, 12:1340  
<https://doi.org/10.12688/f1000research.141987.1>**Latest published:** 18 Jul 2024, 12:1340  
<https://doi.org/10.12688/f1000research.141987.2>**Abstract****Objective:** To evaluate the scientific production on university social responsibility (USR) from institutions in Latin America and the Caribbean.**Methods:** A bibliometric analysis was conducted on documents published in indexed journals in the Scopus database from its inception until April 2023. Eligible documents included those on USR describing experiences carried out by universities in Latin America and the Caribbean. The number of articles per author, average authors per article, average citations per article, and the number of documents with one or more author were described. Bibliometric indicators regarding authors per article, co-authors per article, and institutional collaboration were presented. Bibliometric networks were constructed based on bibliographic coupling analysis of documents by countries and term co-occurrence in titles and abstracts.**Results:** Of a total of 4075 documents retrieved from Scopus, 150 were included. Documents published between 1997 and 2023 were identified, with an average annual growth rate of 2.7%. A total of 439 authors were identified, 18 articles had a single author, and an average of 0.3 articles per author and a co-authorship index of 3.13 were found. The percentage of international collaborations was 30.7%. Brazil had the highest proportion of publications (26.4%), followed by Chile (17%) and Colombia (13.2%). *Opción* and *Revista de Ciencias Sociales* were the journals with the highest number of articles published (13 each). In the analysis of term co-occurrence, recent**Open Peer Review****Approval Status**

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<b>version 2</b>		
(revision)		
18 Jul 2024		
<b>version 1</b>		
16 Oct 2023		

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Any reports and responses or comments on the article can be found at the end of the article.

years showed an increase in the use of terms related to e-learning, information and communication technologies, virtual education, COVID-19, sustainable development goals, and URSULA (initiative on USR in institutions in Latin America and the Caribbean).

**Conclusions:** A growth in scientific production on USR in Latin America and the Caribbean was identified. The interest in USR documents in recent years has been focused on COVID-19 and the challenges of virtual education and sustainable development.

### Keywords

University social responsibility, Latin America, University, Higher education, Community

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**Competing interests:** No competing interests were disclosed.

**Grant information:** The author(s) declared that no grants were involved in supporting this work.

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**How to cite this article:** Urrunaga-Pastor D, Bendezu-Quispe G, Dávila-Altamirano D *et al.* **Bibliometric analysis of scientific production on university social responsibility in Latin America and the Caribbean [version 2; peer review: 2 approved]** F1000Research 2024, 12:1340 <https://doi.org/10.12688/f1000research.141987.2>

**First published:** 16 Oct 2023, 12:1340 <https://doi.org/10.12688/f1000research.141987.1>

**REVISED Amendments from Version 1**

The revised version of the manuscript includes changes to the introduction and an expanded description of the results. We have also enriched the discussion with relevant background information and extended the conclusion of the manuscript. The search strategy has also been revised. The reviewers' feedback has been carefully considered to enhance this revised version.

**Any further responses from the reviewers can be found at the end of the article**

**Introduction**

In recent decades university social responsibility (USR) has gained increasing importance both in the academic and social spheres.<sup>1</sup> USR refers to the commitment of higher education institutions to actively contribute to the sustainable development of society through the generation and application of knowledge, as well as the training of ethical and responsible professionals.<sup>1-4</sup> It is essential to study USR to understand the impact of universities on their environment and foster greater integration between academia and society.<sup>5</sup> Research on USR provides valuable insights into practices, challenges, and opportunities related to social responsibility in the university context.<sup>6</sup>

The scientific literature has addressed USR from different perspectives, but it is necessary to specifically analyze the scientific production in Latin American universities. Several previous studies have analyzed the topic of USR in different regions of the world, such as Europe and globally.<sup>7-12</sup> However, research focused on Latin America and the Caribbean still presents significant gaps in terms of scientific production in this field. Bibliometric analysis is a useful methodology for the quantitative study of articles published in an area of knowledge and its activity indicators in relation to the number of publications and their productivity during a given period.<sup>13,14</sup> It is less susceptible to researcher bias than narrative studies for this purpose when reporting results of statistical analysis.<sup>13,14</sup>

Understanding the current situation and trends in USR in Latin American universities will help identify areas for improvement and best practices, as well as provide a solid foundation for decision-making and policy formulation.<sup>7,15</sup> Therefore, the aim of this study was to evaluate the scientific production in USR related to institutions in Latin America and the Caribbean, through bibliometric analysis of publications indexed in the Scopus database. It is expected to identify possible gaps and challenges in current scientific production, which will contribute to guiding future research and promoting academic collaboration in the region.<sup>5,16</sup>

**Methods****Study design**

A bibliometric analysis was conducted on the scientific production of USR in institutions in Latin America and the Caribbean.<sup>17</sup> Scientific articles indexed in the Scopus database were included from its inception until April 2023. Articles addressing USR and describing an experience conducted by a university in Latin America and the Caribbean were included, regardless of the study design.

**Database**

The Scopus database was chosen for the present bibliometric analysis due to its breadth and coverage of scientific articles (wide range of subjects), includes useful tools for author disambiguation, as well as its availability of metadata useful for this type of analysis.<sup>18,19</sup>

**Search strategy**

The search strategy was conducted by one of the authors (GBQ) and included free terms used for searching the title, abstract, and keywords of the articles indexed in the Scopus database. The search formula is described in detail in a repository.<sup>20</sup> The search strategy was independently reviewed and evaluated by another author (DUP). The search was not restricted by year or language of publication.

**Data collection**

Data for each research article found during the search were downloaded as a.csv file from Scopus and imported into the Rayyan website. Two authors (DUP and GBQ) reviewed the title and abstract of each article to assess compliance with the eligibility criteria.

**Bibliometric analysis**

The Bibliometrix package in the R Studio statistical program was used for the analysis. One author (GBQ) manually standardized the names and affiliations of the authors found. The characteristics of the included articles were described,

including the number of articles per author, average number of authors per article, average number of citations per article, and the number of documents with one or more author. Information about the authors, countries, and journals with the highest number of documents about USR was presented. Additionally, useful indicators for bibliometric evaluation, such as the authorship rate (ratio between the total number of articles and the total number of authors), co-authorship rate (average number of co-authors per article), and collaboration rate (ratio between the total number of authors of articles with multiple authors and the total number of articles with multiple authors) were described.

The VOSviewer software was used to construct and observe bibliometric networks based on bibliographic coupling analysis, using information on the countries of institutions with documents on USR, and an overlay visualization was constructed based on the co-occurrence of terms in titles and abstracts (using the score attribute average publication year). In temporal co-occurrence of terms, the software calculates the mean year of occurrence for the keyword across the timeline. It assigns a temporally ordered color to the keyword node of the map, as darker-colored nodes show topics studied in earlier years, while lighter-colored nodes show topics in recent years. No threshold was set for the inclusion of terms for the analysis of term co-occurrence. For this analysis, terms related to USR were excluded.

### Ethical considerations

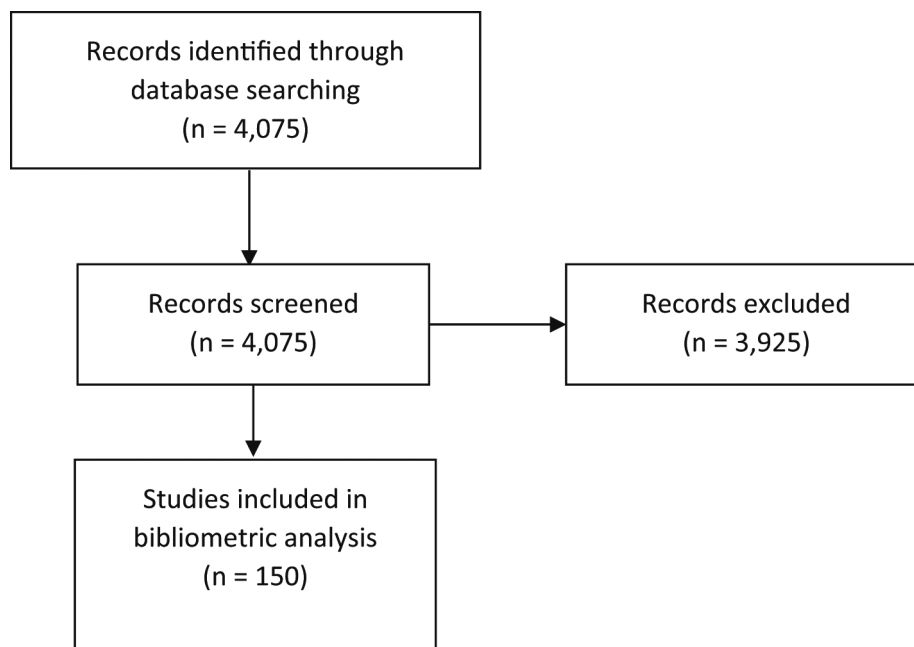
Data from documents published in journals indexed in the Scopus bibliographic database, which do not include confidential data of human subjects, were analyzed. Therefore, ethical committee approval was not required for this study.

### Results

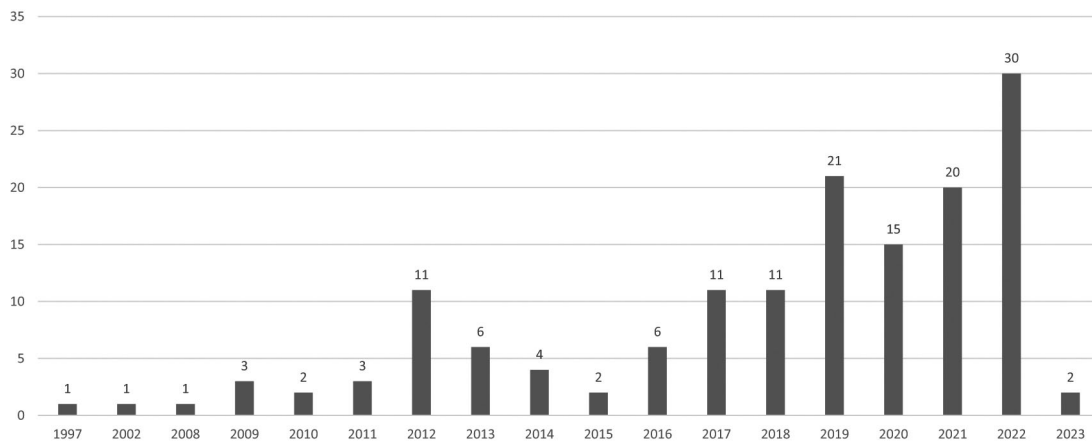
A total of 4,075 records were retrieved from the SCOPUS bibliographic database. After excluding documents that did not meet the eligibility criteria, 150 scientific articles were included (Figure 1). We included articles published between 1997 and 2023 (Figure 2). An increase in the number of scientific articles on USR was identified, with an average annual growth rate of 2.7%. The year 2022 had the highest number of published documents.

Regarding the authors of the documents, a total of 439 authors was identified. On average, there were 0.3 articles per author, a co-authorship index per document of 3.13, and 18 articles had a single author. The percentage of international collaborations was 30.7%. The authors Severino-González P (12 articles) and Sarmiento-Peralta G (4 articles) had the highest number of scientific publications (Table 1).

In terms of the country of origin of the institutional affiliation of the corresponding authors of the articles on USR, Brazil had the highest proportion of publications (26.4%), followed by Chile (17%) and Colombia (13.2%). Brazil had the



**Figure 1. Flowchart of selection.**



**Figure 2.** Scientific production in Scopus during the study period.

**Table 1.** Authors with the highest scientific production ( $\geq 2$  or more documents) in Scopus related to university social responsibility in Latin America and the Caribbean.

Author*	Number of publications
Severino-González P	12
Sarmiento-Peralta G	4
Rubio-Rodríguez Ga	3
Acuña-Moraga O	2
Calderón AI	2
Chalco KYM	2
Del Castillo CAS	2
Delgado FAD	2
Delgado MFF	2
García Martínez J	2
Machaca ESM	2
Martí-Noguera JJ	2
Quezada RG	2
Quintanilla KPB	2
Ramos Parra C	2
Romero-Argueta J	2
Vallaes F	2

\*Only authors with  $\geq 2$  documents are presented.

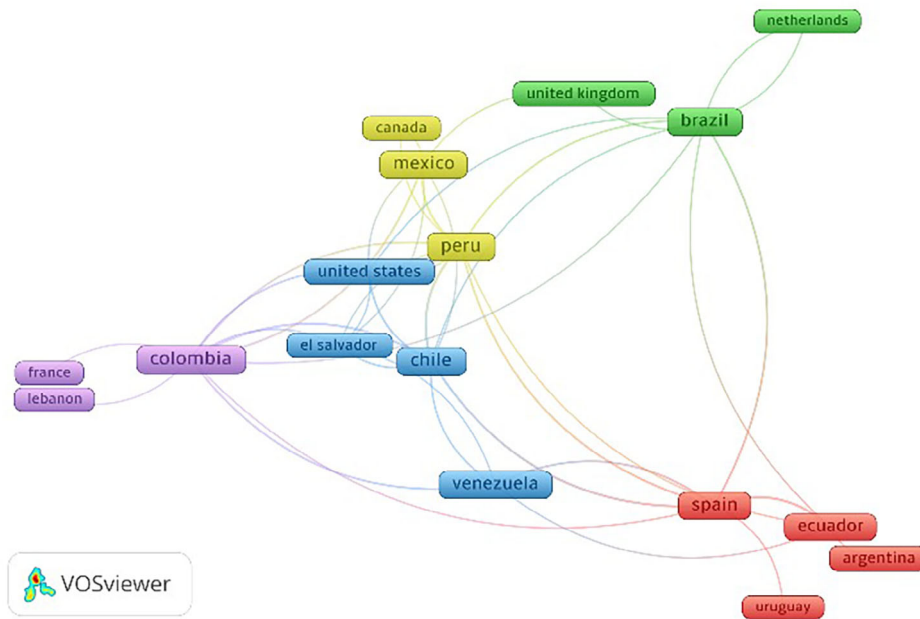
highest number of documents as the sole country of institutional affiliations of the authors (12 documents). Additionally, Brazil topped the list of countries with the highest number of citations and average citations per article, with 58 and 4.1, respectively, followed by Chile (49 and 5.4, respectively) and Colombia (45 and 6.4, respectively) (Table 2). These three countries (Brazil, Chile, and Colombia), along with Peru, were of note in international network collaboration in publications on USR (Figure 3).

Regarding citations, the articles had an average of 4.6 citations. The articles by Sánchez-Hernández MI (2016) and Vallaes F (2019) had the highest number of citations (42 and 36, with an average citation rate of 5.3 and 7.2 per year, respectively). *Opción* and *Revista de Ciencias Sociales* were the journals in which the highest number of articles were published, with 13 each (Table 3).

**Table 2. Countries with the highest number of corresponding author and its total citations and average citations per article in Scopus related to university social responsibility in Latin America and the Caribbean.**

Country*	Number of articles (%)	Total citations	Average citations per article
Brazil	14 (26.4)	58	4.1
Chile	9 (17.0)	49	5.4
Colombia	7 (13.2)	45	6.4
Mexico	5 (9.4)	7	1.4
Spain	5 (9.4)	42	8.4
Venezuela	5 (9.4)	12	2.4
Ecuador	3 (5.7%)	3	1

\*Only countries with ≥3 corresponding author are presented.



**Figure 3. Collaboration network among countries on scientific production related to university social responsibility in Latin America and the Caribbean.**

**Table 3. Journals with the highest number of publications in Scopus related to university social responsibility in Latin America and the Caribbean.**

Journal	Number of articles*
Opción	13
Revista de Ciencias Sociales	13
Revista Venezolana de Gerencia	11
Espacios	8
Formación Universitaria	7
Universidad y Sociedad	5
Interciencia	3
International Journal of Educational Management	3
Revista Iberoamericana de Educación Superior	3
Sustainability (Switzerland)	3
World Sustainability Series	3

\*Only journals with ≥3 documents are presented.



which lead in research output in the region.<sup>27–29</sup> It is worth noting that the countries with the highest contributions to scientific production are of middle and high income. Findings from other studies that have examined the potential relationship between income and scientific production.<sup>30</sup> Therefore, it is possible that country-level promotion and initiatives explain this finding in countries with higher scientific production and not the country income level.

The authors with the highest scientific production did not exceed 13 scientific articles in Scopus, with researchers affiliated with institutions in Chile, Peru, and Colombia being of note, respectively. These countries, along with Brazil, demonstrate clear regional collaboration as well as collaboration with countries with advanced scientific development, as shown in the collaborative network graph. In various fields of knowledge, north-south collaboration is described as part of the early research development process in countries with lower scientific development.<sup>31,32</sup> This influence may be observed in the development of research on USR in the Latin American and Caribbean region. On the other hand, the gap between the top-producing author and the second highest is eight articles, which reinforces the idea that USR is a young and growing field.

The scientific journal with the highest number of articles published was *Opción*, followed by the *Revista de Ciencias Sociales* and the *Revista Venezolana de Gerencia*. These journals publish papers related to social sciences, humanities, and education. This is consistent with a previous study,<sup>33</sup> which explains that USR primarily falls within the field of social sciences, education, and humanities. Additionally, these journals were also reported previously as leaders in publication regarding USR worldwide.<sup>33</sup> Therefore, documents on USR from institutions in Latin America and the Caribbean would be of interest to these journals and their readers. All three journals are Venezuelan and have been indexed in Scopus for no more than 15 years. This aligns with the years when an increase in scientific production related to USR in Latin American institutions was observed.

The co-occurrence analysis of terms indicates that documents on USR from Latin American and Caribbean institutions have shifted from general aspects, such as ethics and education, to focusing on current challenges, such as the context of the COVID-19 pandemic, virtual education, and the use of information and communication technologies. As described in other fields, it is expected that over the years publications on a topic, such as USR, would shift focus from generalities to addressing its current applicability and challenges. Among the recently used terms is URSULA (Latin American Union for University Social Responsibility), which seeks to provide innovative proposals to improve the social and environmental role of universities through dialogue among different stakeholders, such as civil society, governments, scientists, and businesses.<sup>34</sup> In recent years, some Latin American countries have worked on implementing policies and programs that promote USR.<sup>6,16,35</sup> These initiatives may include incentives, funding, or specific requirements for academic institutions to conduct research and projects aimed at social well-being. This situation, combined with increased access to resources and technology in academic institutions, would generate greater opportunities for scientific research and the dissemination of its results, which could also explain the increase in scientific production on USR in the region.

To the best of our knowledge, this bibliometric analysis is the first to evaluate the scientific production on USR from institutions in Latin America. The results are valuable for identifying the current status and growth of this area. Additionally, we can identify authors who work in this field and the journals that frequently publish related articles. Among the potential limitations of this research, it should be mentioned that articles published in databases other than Scopus were not included, which means that some documents on USR from institutions in Latin America and the Caribbean may not have been considered. However, we believe that using Scopus, a reliable and widely employed source for bibliometric studies, ensures that the results obtained are from documents published in journals with quality criteria, such as peer review, and the requirements demanded by the bibliographic database for the inclusion of indexed journals, that is, the documents retrieved through the search strategy in this study. In this bibliometric analysis, a review of the title and abstract of the documents was conducted for their inclusion in the analysis, which strengthens the study as it ensured the inclusion of only documents on USR.

## Conclusions

In conclusion, there is an increase in scientific production on USR by researchers from institutions in Latin America and the Caribbean. The countries leading the research in the region (Brazil, Chile, and Colombia) also show leadership in documents on USR in Latin America and Caribbean institutions. Around a third of the scientific production at URS by institutions in Latin America and the Caribbean is carried out by international collaboration. In recent years, the focus of documents on USR by Latin American and Caribbean institutions has been on COVID-19, virtual education, and sustainable development. Quantifying the scientific production on USR in Latin America and the Caribbean provides a baseline for future research in the field that may consider the use of other bibliographic databases, including regional databases as well as gray literature to evaluate scientific production on MSW more comprehensively.



## Data availability

Figshare: Search strategy. DOI: <https://doi.org/10.6084/m9.figshare.26180854>.<sup>20</sup>

This project contains the following underlying data:

- An.docx file containing revised Scopus search strategy used to perform this bibliometric analysis.

Figshare: Database containing the articles included in the analysis. DOI: <https://doi.org/10.6084/m9.figshare.24069399>.<sup>36</sup>

This project contains the following underlying data:

- An.xls file containing the database of articles included in the bibliometric analysis is available.

Data are available under the terms of the [Creative Commons Zero “No rights reserved” data waiver](#) (CC BY 4.0 Public domain dedication).

## Acknowledgment

We would like to express our gratitude to the Universidad Científica del Sur for their English editing support and financial assistance in covering the article processing charge.

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# Open Peer Review

Current Peer Review Status:  

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## Version 2

Reviewer Report 30 July 2024

<https://doi.org/10.5256/f1000research.168804.r304719>

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**Maria Jesus Martinez Usarralde** 

Department of Comparative Education and History of Education, University of Valencia, Valencia, Spain

**Nicolás Ponce Diaz**

Facultad de Educación, University of Antofagasta, Antofagasta, Antofagasta Region, Chile

The revisions are appropriate for me.

**Competing Interests:** No competing interests were disclosed.

**Reviewer Expertise:** Comparative Education. International Education. Teaching Education. Service Learning.

**We confirm that we have read this submission and believe that we have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.**

Reviewer Report 26 July 2024

<https://doi.org/10.5256/f1000research.168804.r304720>

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**Mikel Perez-Gutierrez** 

Universidad de Cantabria, Santander, Cantabria, Spain

The quality of the article was improved, clarifying the methodology, results, discussion and conclusions sections.

Minor errors were detected. In Table 2, Brazil is not top regarding average citations per article (Spain obtained 8.4) so the sentence should be amended. In the conclusions section, URS was used instead of USR. This error should be amended.

**Competing Interests:** No competing interests were disclosed.

**Reviewer Expertise:** Bibliometrics, Sport Sciences, Physical Education

**I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.**

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### Version 1

Reviewer Report 14 February 2024

<https://doi.org/10.5256/f1000research.155478.r225262>

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**Mikel Perez-Gutierrez**

Universidad de Cantabria, Santander, Cantabria, Spain

The manuscript carried out a bibliometric analysis of the scientific production indexed in Scopus focused on University Social Responsibility by Latin America and Caribbean institutions. The manuscript offers an overview of the main bibliometric indicators for characterising this scientific output. However, some deficiencies should be amended for improving the quality and reproducibility of the research (methodology section) as well as the understanding of the obtained results (results, discussion and conclusions sections). These suggestions are the following:

- Page 3: For improving the understanding of the manuscript and its object of study, Latin America and the Caribbean countries should be defined and justified. For that purpose, CELAC (Comunidad de Estados Latinoamericanos y Caribeños) could be used for defining the countries considered under the term "Latin America and the Caribe". For citation, these pages should be consulted and cited: <http://s017.sela.org/celac/quienes-somos/que-es-la-celac/> or [https://es.wikipedia.org/wiki/Comunidad\\_de\\_Estados\\_Latinoamericanos\\_y\\_Caribe%C3%B1os](https://es.wikipedia.org/wiki/Comunidad_de_Estados_Latinoamericanos_y_Caribe%C3%B1os),
- Page 3: A justification of the database chosen for data retrieval should be included. The work carried out by Gusenbauer and Haddaway (2020) analysed the coverage and breadth of several databases, concluding Scopus is a principal database and justifying its use in the present manuscript. (Gusenbauer et al) <sup>1</sup>
- Page 3: All bibliometric indicators included in the results section should be explained. Total citations and the average citations per article by each country are included in Table 2. Table 3 presents the number of articles published in the most important journals. These indicators should be mentioned here.

- Page 3: According to the results presented in Figure 4, an explanation about the analysis applied for the temporal evolution of the term co-occurrence and the presentation of results (temporal evolution by means of colours?) should be included. How this temporal evolution is presented in Figure 4?
- Page 4: The difference between "author" and "mention" should be explained in the methodology section. Are "mentions" referring to "signatures"?
- Page 4: Regarding the obtained results presented in Table 2, the highest average of citations per article was obtained by Lebanon. If authors are referring to the Latin America and Caribbean countries with the highest average citations per article, Colombia achieved the highest (8.4), followed by Chile (5.4) and Brazil (4.1). The sentence should be amended for clarifying this information.
- Page 5: The title of Table 1 (Authors with the highest scientific production) is not representing the results included since there are three authors with one paper, but there are more authors with only one paper. The title of the table and the results included should be amended. Firstly, authors with 2 or more papers should be only included in Table 1. Thus, the title of Table 1 should be the following: "Authors with two or more articles indexed in Scopus..."
- Page 5: Table 2 should also include the amount of papers by country for comparing their productivity. Moreover, in the results section the percentage of publications per country is described (Brazil 26.4%, Chile 17% and Colombia 13.2%).
- Page 6: As it was mentioned in Table 1, the title of Table 3 (Journals with the highest scientific production) is not representing the results included since there are three journals with one paper, but it seems there are more journals with only one paper. The title of the table and the results included should be amended. Firstly, journals with 3 or more papers should be only included in Table 3. Thus, the title of Table 3 should be the following: "Journals with three or more publications..."
- Page 7: The results obtained in the present manuscript should be compared with those obtained by Duque and Cervantes-Cervantes (2019) since their topic is the same. Specifically, results could be compared according to total number of articles focused on University Social Responsibility, distribution of articles by country, distribution of articles by year, most productive authors and most important journals for disseminating USR scientific output. This comparison is relevant for determining the contribution of Latin America and Caribbean countries, institutions or authors to the worldwide scientific output in this topic.
- Page 8: "To the best of our knowledge, this bibliometric analysis is the first to evaluate the scientific production on USR associated with institutions in Latin America". According to the bibliometric analysis developed, the present manuscript is evaluating the scientific production on USR published by Latin America and Caribbean institutions. The sentence should be amended.
- Page 8: The conclusion section should be strengthened. An explanation about the causes and consequences of this analysis should be included. Some questions to answer are: What is the relevance of Latin America and Caribbean institutions regarding USR scientific output? Who is the most important author/country? Is collaboration among authors, institutions or countries essential for developing research on USR? What are the strengths and weaknesses of this field of knowledge? What knowledge gaps need to be filled? To which countries should investment in research be directed?

## References

1. Gusenbauer M, Haddaway NR: Which academic search systems are suitable for systematic reviews or meta-analyses? Evaluating retrieval qualities of Google Scholar, PubMed, and 26 other resources. *Res Synth Methods*. 2020; **11** (2): 181-217 [PubMed Abstract](#) | [Publisher Full Text](#)

**Is the work clearly and accurately presented and does it cite the current literature?**

Yes

**Is the study design appropriate and is the work technically sound?**

Yes

**Are sufficient details of methods and analysis provided to allow replication by others?**

Partly

**If applicable, is the statistical analysis and its interpretation appropriate?**

Yes

**Are all the source data underlying the results available to ensure full reproducibility?**

Yes

**Are the conclusions drawn adequately supported by the results?**

Partly

**Competing Interests:** No competing interests were disclosed.

**Reviewer Expertise:** Bibliometrics, Sport Sciences, Physical Education

**I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.**

Author Response 03 Jul 2024

**Diego Urrunaga-Pastor**

Dear Reviewer,

We appreciate your review of our manuscript and the comments you provided. Below, we have addressed each of your observations in detail:

Comment 1: Page 3: For improving the understanding of the manuscript and its object of study, Latin America and the Caribbean countries should be defined and justified. For that purpose, CELAC (Comunidad de Estados Latinoamericanos y Caribeños) could be used for defining the countries considered under the term "Latin America and the Caribbean". For citation, these pages should be consulted and cited: [<http://s017.sela.org/celac/quienes-somos/que-es-la-celac/>](<http://s017.sela.org/celac/quienes-somos/que-es-la-celac/>) or [[https://es.wikipedia.org/wiki/Comunidad\\_de\\_Estados\\_Latinoamericanos\\_y\\_Caribe%C3%B1os](https://es.wikipedia.org/wiki/Comunidad_de_Estados_Latinoamericanos_y_Caribe%C3%B1os)]([https://es.wikipedia.org/wiki/Comunidad\\_de\\_Estados\\_Latinoamericanos\\_y\\_Caribe%C3%B1os](https://es.wikipedia.org/wiki/Comunidad_de_Estados_Latinoamericanos_y_Caribe%C3%B1os))

Response: We appreciate your comment. All the document sections were reviewed and improved. Since the provided reference by the reviewer was not available, the Latin America & Caribbean countries list by United Nations was used.

Comment 2: Page 3: A justification of the database chosen for data retrieval should be included. The work carried out by Gusenbauer and Haddaway (2020) analyzed the coverage and breadth of several databases, concluding Scopus is a principal database and justifying its use in the present manuscript.

Response: We appreciate your comment. We cited documents in the methods to justify the database used (Scopus).

Comment 3: Page 3: All bibliometric indicators included in the results section should be explained. Total citations and the average citations per article by each country are included in Table 2. Table 3 presents the number of articles published in the most important journals. These indicators should be mentioned here.

Response: We appreciate your comment. Regarding the clarification of all bibliometric indicators, there are stated in the methods: "Additionally, useful indicators for bibliometric evaluation, such as the authorship rate (ratio between the total number of articles and the total number of authors), co-authorship rate (average number of co-authors per article), and collaboration rate (ratio between the total number of authors of articles with multiple authors and the total number of articles with multiple authors) were described." The information about the results presented in Tables 2 and 3 was added to the methods.

Comment 4: Page 3: According to the results presented in Figure 4, an explanation about the analysis applied for the temporal evolution of the term co-occurrence and the presentation of results (temporal evolution by means of colours?) should be included. How is this temporal evolution presented in Figure 4?

Response: We appreciate your comment. In methods, information was added to clarify. Additionally, the figure 2 was reuploaded since in the reviewed manuscript, it seems that the legend (colors according to the timeline in years) was not presented.

Comment 5: Page 4: The difference between "author" and "mention" should be explained in the methodology section. Are "mentions" referring to "signatures"?

Response: We appreciate your comment. This information was confusing. We improve the redaction.

Comment 6: Page 4: Regarding the obtained results presented in Table 2, the highest average of citations per article was obtained by Lebanon. If authors are referring to the Latin America and Caribbean countries with the highest average citations per article, Colombia achieved the highest (8.4), followed by Chile (5.4) and Brazil (4.1). The sentence should be amended for clarifying this information.

Response: We appreciate your comment. This table was improved, and the information

reported about this table.

Comment 7: Page 5: The title of Table 1 (Authors with the highest scientific production) is not representing the results included since there are three authors with one paper, but there are more authors with only one paper. The title of the table and the results included should be amended. Firstly, authors with 2 or more papers should be only included in Table 1. Thus, the title of Table 1 should be the following: "Authors with two or more articles indexed in Scopus..."

Response: We appreciate your comment. Table 1 was updated with the suggestions.

Comment 8: Page 5: Table 2 should also include the amount of papers by country for comparing their productivity. Moreover, in the results section, the percentage of publications per country is described (Brazil 26.4%, Chile 17% and Colombia 13.2%).

Response: We appreciate your comment. This table was improved, and the information reported about this table.

Comment 9: Page 6: As it was mentioned in Table 1, the title of Table 3 (Journals with the highest scientific production) is not representing the results included since there are three journals with one paper, but it seems there are more journals with only one paper. The title of the table and the results included should be amended. Firstly, journals with 3 or more papers should be only included in Table 3. Thus, the title of Table 3 should be the following: "Journals with three or more publications..."

Response: We appreciate your comment. The table was updated with the suggestion.

Comment 10: Page 7: The results obtained in the present manuscript should be compared with those obtained by Duque and Cervantes-Cervantes (2019) since their topic is the same. Specifically, results could be compared according to total number of articles focused on University Social Responsibility, distribution of articles by country, distribution of articles by year, most productive authors and most important journals for disseminating USR scientific output. This comparison is relevant for determining the contribution of Latin America and Caribbean countries, institutions or authors to the worldwide scientific output in this topic.

Response: We appreciate your comment. We added the recommended document in the discussion of the results.

Comment 11: Page 8: "To the best of our knowledge, this bibliometric analysis is the first to evaluate the scientific production on USR associated with institutions in Latin America". According to the bibliometric analysis developed, the present manuscript is evaluating the scientific production on USR published by Latin America and Caribbean institutions. The sentence should be amended.

Response: We appreciate your comment. The sentence was amended.

Comment 12: Page 8: The conclusion section should be strengthened. An explanation about



the causes and consequences of this analysis should be included. Some questions to answer are: What is the relevance of Latin America and Caribbean institutions regarding USR scientific output? Who is the most important author/country? Is collaboration among authors, institutions or countries essential for developing research on USR? What are the strengths and weaknesses of this field of knowledge? What knowledge gaps need to be filled? To which countries should investment in research be directed?

Response: We appreciate your comment. The conclusion was improved

**Competing Interests:** The authors declare that they have no competing interests.

Reviewer Report 13 November 2023

<https://doi.org/10.5256/f1000research.155478.r217335>

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**Maria Jesus Martinez Usarralde** 

Department of Comparative Education and History of Education, University of Valencia, Valencia, Spain

**Nicolás Ponce Diaz**

Facultad de Educación, University of Antofagasta, Antofagasta, Antofagasta Region, Chile

The article needs some improvement:

- The introduction is excessively brief, as is the conclusion.
- In the "search strategy" section, they point out that they have restricted language and year, but the Vosviewer programme only codes articles in English.
- "There are no significant differences between high and low income countries". This is not being evidenced and is based on a study that has nothing to do with the research field.
- Paragraph on co-occurrence: the desire expressed by the authors cannot be derived from a co-occurrence analysis.
- "The bibliometric analysis is the first to evaluate the scientific production of USR associated with Latin American institutions": the analysis referred to in the article is not observed in this article, in the sense that the data do not reflect the scientific production of USR in Latin American institutions.

**Is the work clearly and accurately presented and does it cite the current literature?**

Yes

**Is the study design appropriate and is the work technically sound?**

Partly

**Are sufficient details of methods and analysis provided to allow replication by others?**

Partly

**If applicable, is the statistical analysis and its interpretation appropriate?**

I cannot comment. A qualified statistician is required.

**Are all the source data underlying the results available to ensure full reproducibility?**

Partly

**Are the conclusions drawn adequately supported by the results?**

No

**Competing Interests:** No competing interests were disclosed.

**Reviewer Expertise:** Comparative Education. International Education. Teaching Education. Service Learning.

**We confirm that we have read this submission and believe that we have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however we have significant reservations, as outlined above.**

Author Response 03 Jul 2024

**Diego Urrunaga-Pastor**

Dear Reviewers,

We appreciate your review of our manuscript and the comments you provided. Below, we have addressed each of your observations in detail:

Comment 1: The introduction is excessively brief, as is the conclusion.

Response:

We appreciate your comment. Relevant Information was added to the manuscript regarding bibliometric analysis.

Comment 2: In the "search strategy" section, they point out that they have restricted language and year, but the Vosviewer programme only codes articles in English.

Response:

We appreciate your comment. The document states, "The search was not restricted by year or language of publication." No change was conducted.

Comment 3: "There are no significant differences between high- and low-income countries".

This is not being evidenced and is based on a study that has nothing to do with the research field.

Response:

We appreciate your comment. The redaction was improved. The writing was improved according to the comment.

Comment 4: Paragraph on co-occurrence: the desire expressed by the authors cannot be derived from a co-occurrence analysis.

Response:

Thank you for the recommendation. Regarding the co-occurrence overlay visualization, the attribute average publication year of the document in which a keyword or a term occurs was used in the document. As it is described in the VOSViewer manual about this attribute, "The average publication year of the documents in which a keyword or a term occurs or the average publication year of the documents published by a source, an author, an organization, or a country." Hence, the interpretation of this visualization is appropriate for discussion. Information was added in methods to clarify.

Comment 5: "The bibliometric analysis is the first to evaluate the scientific production of USR associated with Latin American institutions": the analysis referred to in the article is not observed in this article, in the sense that the data do not reflect the scientific production of USR in Latin American institutions.

Response:

We appreciate your comment. The expression "associated with" was replaced with "from" to be more precise as it is stated in the reviewer comment.

**Competing Interests:** The authors declare that they have no competing interests.

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