

**Research Article** 

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# Bibliometric Studies on Rural Female Entrepreneurship: A Metabibliometric Review

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#### Abstract

Entrepreneurship as an important factor for economic development has also become a field of research to understand the causes, effects, successes, failures, characteristics, financing, and other aspects of entrepreneurship. One of the important aspects that studies on entrepreneurship must consider is a gender approach, from that perspective, the research aims to identify trends in research on female entrepreneurship in rural areas based on an analysis of bibliometric studies conducted in this field. A deductive, bibliographic, descriptive, and correlational method was used, and bibliometrics was used as an instrument. The data used were retrieved from three databases: Scopus, WOS, Google Scholar, to identify types, scope and trends of research and provide researchers with a scientific basis on the current situation. A total of 44 papers were considered as population and after using the PRISMA method and excluding studies not related to the research objective and duplicates with the Scopus database, a total of 30 articles were analyzed which constitute the total sample. VOSviewer and SPSS were used for the analysis. The search for documents in the three databases covered the period from 1960 to 2023. The results show, therefore, that bibliometric research on entrepreneurship has not yet addressed other topics beyond a generalization of female entrepreneurship, such as studies on entrepreneurship considering gender, rural geographic spaces, ICT, training, financing, effects, causes, successes, and failures. This allows us to detect that there is an ample scope for developing research not only at the case level, but also at the country level, because for example, in the case of Ecuador we were unable to identify bibliometric studies that analyses these different aspects with a gender focus and spatial intervention of the rural sphere on women's entrepreneurship. On the other hand, research is focused on showing results of female entrepreneurship in urban areas and very little or almost nothing in rural areas, mainly in Latin American countries. It is also observed that they have a recent trend, which would contribute to obtaining indicators and planning future research, as well as contributing to the definition of policies and knowing the discipline state and its progress.

Keywords: Bibliometrics, metabibliometrics, entrepreneurship, female, rural

#### 1. Introduction

Bibliometrics is a tool that allows us to know the situation of research in an area of knowledge based on indicators that allows to organize information for a quantitative and qualitative analysis, because research needs to use a scientific process, that at the end becomes an investment; it is therefore important to evaluate science and scientists for the intangible results they report, which imply and impact on productivity (it cannot be evaluated automatically), so it is imperative:

to evaluate the performance of scientific activity and its impact on society... [because] ... the scientific results evaluation has not yet been definitively resolved, since it involves the complex mechanism of measuring the knowledge generated in research work... Bibliometric analysis is a documentary method that has developed significantly over the last three decades. Its main objectives are, on the one hand, to study the size, growth, and distribution of scientific documents, on the other hand, the investigation on the group's structure and dynamics that produce and consume these documents and the information they contain. (López & Terrada, 1992; Terrada & Periz, 1978 quoted in Gonzalez de Dios, Moya, & Mateos-Hernandez, 1997, p. 237).

In this context, entrepreneurship as an important factor for economic development has also become a field of research to understand the causes, effects, successes, failures, characteristics, financing, and other aspects related to entrepreneurship. The data on entrepreneurship from the Global Entrepreneurship Monitor. 2020/2021 Global Report (GEM) show that in around 22 of 47 economies considered in GEM, half of adult report that the pandemic reduced their household income in 2021 and that they would be willing to start new businesses after the COVID-19 pandemic.

One of the important aspects that studies on entrepreneurship should consider is the gender approach, from that perspective, in the knowledge society gender issue has more and more space, mainly in the academic community (Machado & Sousa, 2020; Ayaviri-Nina et al., 2023) and other aspect is related to geographical or spatial scope, i.e. the place where the enterprises are developed, such as urban or rural area. On the other hand, rural entrepreneurship is scattered and lacks categorization (Shrivastava & Kumar, 2021), therefore, the present research assumes a gender approach, prioritizing women's participation in rural entrepreneurship.

From this perspective, there has been an increase in the study and publication of findings on entrepreneurship in various sources of information, mainly in journals and in turn in international databases such as: WOS, Scopus, and regional databases such as: Dialnet, Scielo, Latindex, among the most representative. Likewise, this growth allowed the compilation, organization, quantification, and analysis of this research body through bibliometric studies by different authors, however, identifying studies of entrepreneurship related to the rural area and considering women as an important actor, there are no developed works, and it is relevant. Furthermore, it was not possible to identify a bibliometric or scientometric studies that evaluates bibliometric research on entrepreneurship, mainly in rural areas and considering the female gender, so "it is important to use bibliometrics, scientometrics as systematic and reliable methods to evaluate a branch of knowledge because it allows society to see the contributions that originate from this knowledge (Monsalve et al., 2020).

Thus, the present research was developed by considering bibliometric research on entrepreneurship with a gender focus and in rural settings, i.e., bibliometric studies on women's entrepreneurship in rural areas are analyzed to answer the questions: What kind of bibliometric studies are carried out in relation to gender entrepreneurship? Who are the authors that conduct this type of research? What are the findings? What are these studies recommendations?

For this purpose, the research aims to identify trends in research on female entrepreneurship in rural areas based on the analysis of bibliometric studies carried out in the field of female rural entrepreneurship, retrieved from three databases: Scopus, WOS, Google Scholar, to identify the types, scope and trends of research and provide researchers with a scientific basis on its current situation. On the other hand, it is hypothesized that the H1 participation of authors in research is

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related to the topic, objectives, citations and language; H<sub>2</sub> the year of publication, objective, results, database, language, gender, methodology, instruments significantly influence whether an author is cited in published research; H<sub>3</sub> the quality of research is a relevant factor for publication and acknowledgements by other authors; H<sub>4</sub> the increase of research depends on the methodology, instruments, language, gender, results, objectives and database (journals type).

### 2. Methodology

The methodology used is metabibliometrics, which not only allows us to analyze bibliometric indices, but also to analyzes them based on the results obtained. In this way, the research considers bibliometrics and its indicators as a method of evaluation (Gonzalez de Dios et al., 1997). The research is documentary, descriptive with a quantitative and qualitative approach, and uses the deductive method. The literature review was conducted using the systematic literature review method (planning, development, and publication of results) mentioned by (Figueroa, 2020) and (Bettany-Saltikov, 2010), and the PRISMA method is used to reduce bias in the selection of articles (Liberati, et al., 2009), as well as to perform a systematic appraisal of published articles from a systematic review and meta-analysis. On the other hand, VOSviewer was also used for systemic analysis and SPSS for meta-analysis.

#### 2.1 Planning the literature review

The research aims to identify bibliometric studies of female rural entrepreneurship, based on keywords related to entrepreneurship, rural and female or woman, in Scopus, WOS and Google Scholar databases. The first two databases were considered under the parameters of quality, coverage of knowledge and period of publication; however, the Google Scholar database was included in this information search to locate articles that are not included in the two previous databases or repeating.

### 2.2 Review development

The search equation used for the identification of articles, considered, article title, abstract, keywords, was: 1) "Entrepreneurship and bibliometric" papers in the Scopus database were a total of 233, WOS 436 and Google 560 articles; 2) "entrepreneurship and bibliometric and female" in the Scopus database 7, WOS 1, Google 16 articles; 3), "entrepreneurship and bibliometric and women" in the Socpus database 6, WOS 14, Google 0 articles; 4) "entrepreneurship and bibliometric and female and women and rural" in Scopus database 0, WOS 0 y Google 0 articles; There are a total of 1,273 documents retrieved from the three databases, as detailed in table 1.

### Table 1. Summary of documents in the databases

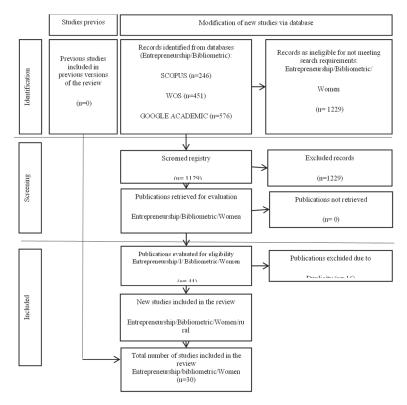
search words	no. of scopus articles	no. of wos articles	no. of articles google academic	total
(title-abs key (entrepreneurship) and title - abs-key (bibliometric)) and (limit-to (doctype, "ar"))	233	436	560	1,229
(title-abs-key (entrepreneurship) and title-abs-key (bibliometric) and title- abs-key (women)) and (limit-to (doctype, "ar"))	7	1	16	24
(title-abs-key (entrepreneurship) and title-abs-key (bibliometric) and title- abs-key (female)) and (limit-to (doctype, "ar"))	6	14	0	20
(title-abs-key (entrepreneurship) and title-abs-key (bibliometric) and title- abs-key (women) and title-abs-key (rural))	0	0	0	о
(title-abs-key (entrepreneurship) and title-abs-key (bibliometric) and title- abs-key (female) and title-abs-key (rural))	0	0	0	о
total general documents	246	451	576	1,273
total specific documents	13	15	16	44

search words	no. of scopus articles	no. of wos articles	no. of articles google academic	total
documents considered in the investigation ( title-abs-key ( entrepreneurship or entrepreneur ) and title-abs-key ( bibliometric ) or title-abs-key ( scientometrics ) and title-abs-key ( women or female ) )	30	4	10	44
the scopus documents are considered for the bliometric analysis and that they are duplicated in the other databases.	30			

#### **Source:** Own elaboration

#### 2.3 Considered publications

To obtain the sample, it was considered to exclude studies that were not related to the research objective, such as: studies where only bibliometric undertaking is specified, being thus the documentary population of 44 documents: Scopus 13, WOS 15, and Google Scholar 16. Finally, the studies considered in the research after proceeding and elimination of duplicate papers accounted for 34%; the non-yes -duplicate papers are 30 articles that constitute the total sample in the Scopus database, but separately (Scopus 30 doubled in WOS 4, Google Scholar 10). This process was conducted in accordance with the PRISMA methodological approach as presented in Figure 1. The search for documents in the three databases considered the period from 1960 to 2023 (February); therefore, it can be noted that it meets the appropriate conditions, and that the analysis is rigorous.



**Figure 1.** PRISMA 2020 flow chart on female rural entrepreneurship **Source:** Own elaboration based on (Page et al., 2021).

#### 2.4 Considered indicators

Theoretical progress on bibliometrics shows some relevant indicators that should be considered for bibliometrics evaluation and meta-analysis, such as: quality, scientific importance and scientific impact (Gonzalez de Dios et al., 1997); the most important being impact, measured by the number of publications and bibliographic citations; On the other hand, we can also find additionally other indicators, as stated by Durieux and Genovenois (2010) and which were used by Cadavid-Higuita et al. (2012, p.218) and (Ortiz et al., 2014, p.48), where the indicators were: 1) Quantity indicators, measured by Number of publications per year, Number of publications per author, Number of publications per journal, Number of publications per country, Number of publications per institution; 2) Quality indicators, measured by number of modes, average number of neighbors, number of isolated nodes. However, it is important to note that bibliometrics is a tool of scientometrics, which allows "the study of the quantitative aspects of science and technology seen as a communication process". From that perspective, the indicators considered in this research contemplate both approaches, summarized in figure 2.

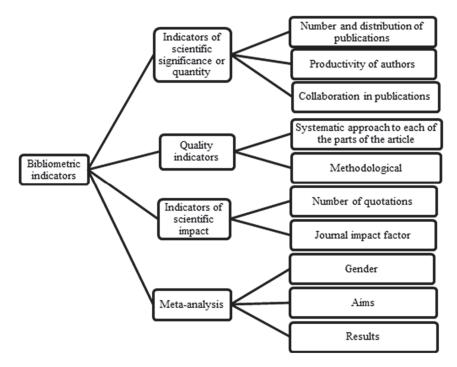


Figure 2. Bibliometric indicators considered in the research Source: Own elaboration based on (Gonzalez de Dios & Mateos-Hernandez, 1997).

H1 participation of authors in research is related to topic, objectives, citations, and language, corroborating the theory; H2 the year of publication, objective, results, database, language, genre, methodology, instruments have a considerable influence on whether an author is cited in published research; H3 research can be published in Journals that accept articles from different languages, genre and bibliometric indicators, although English is a preferred language for publication; H4 research quality is a relevant factor for publication and recognition by other authors; H5the increase of

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research depends on the methodology, instruments, language, genre, results, objectives and database (type of journals); H6 This means that H6 the trend of research is related to rural entrepreneurship, impact and the family.

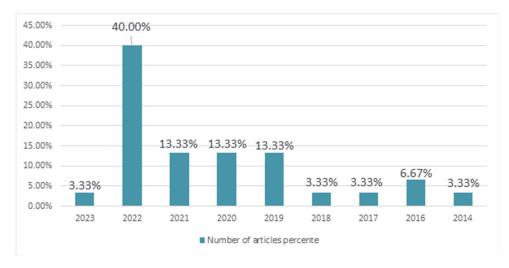
### 3. Results

The results are presented considering the indicators in figure 2.

3.1 Bibliometric indicators of scientific importance or quantity

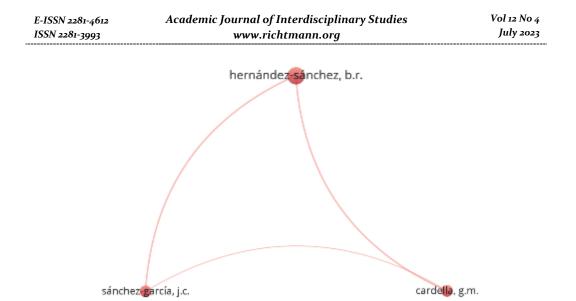
#### a) Number of publications and evolution

Knowing the evolution of bibliometric studies is a crucial factor in determining the trends on the researched topic and measuring the growth of knowledge from the number of publications; thus, the results show that as of 2014 importance is given to bibliometric studies related to women's entrepreneurship, showing that it is growing, especially in the last two years. Thus, the degree of authors participation in this research topic in 2014 was 3.33%; in 2019 it rose to 13.33%; in 2020 it reached 13.33%; in 2021 to 13.33%, in 2022 to 40%, and in 2023 to 3.33%, this could be explained as an effect of the COVID-19 Pandemic (Graphic 1).



**Graphic 1.** Evolution of the number of bibliometric publications on women's entrepreneurship **Source:** Own elaboration

#### b) Frequency the publications by author and journals with highest presence The scientific production per author in this type of bibliometric research is one, however, there is a group of authors who published two bibliometric studies such as: Hernandez – Sanchez, Cardella, Sanchez – Garcia (Graphic 2).



**Graphic 2.** Frequency the publications by author **Source:** Own elaboration

It was also possible to identify that the databases or platforms where bibliometric research on female entrepreneurship is published are 28.6% in Scopus 100%, 33.33% in Scopus, in 13.33 WOS and 53.33% in Google Academic. On the other hand, the authors published in different international journals, with the Frontier Psychology having the largest presence (10%), followed by Springer Proceedings in Bussines and Economic (6.67%); and the rest of the journals with 333% participation (Graphic 3).



**Graphic 3.** Journals most used to publish by author Source: Own elaboration

It is corroborated that "there is a strong correlation between the eminence of a scientist and his or her productivity" (Gonzalez de Dios, Moya, & Mateos-Hernandez, 1997, p. 237). 237), considering Lotka's index, which mentions "to distribute the authors of a set of publications in three levels of productivity: small producers (with only one paper or productivity index equal to o), medium producers (between 2 and 9 papers and productivity index greater than o and less than 1) and large producers (10 or more papers and productivity index equal to or greater than 1" (Lotka, 1926) cited in (Gonzalez de Dios, Moya, & Mateos-Hernandez, 1997, p. 238), being (Cardella, Hernandez, & Hernandez, 1997, p. 238), being (Cardella, Hernandez, & Hernandez, 1997, p. 238), being (Cardella, Hernández-Sánchez, & Sánchez-García, 2020), with the highest scientific production in this type of research, and the rest are small producers.

### c) Collaboration in research

The theory mentions that the average number of signatures per paper may vary according to the area, but for the sciences it may be between 3 and 5 authors, which reflects that most of the papers are produced by working groups in each of them (Canela & Ollé, 1990). In the case of bibliometric research on rural female entrepreneurship, it can be identified that scientific production is developed by working groups composed of an average of 3 researchers, with a minimum of 1 and a maximum of 7; thus, 3.3% of the publications correspond to one author; 26.7% to 2 authors; 26.7% to 3 authors; 40% to 4 authors; 3.3% to 7 authors. This means that there is a high level of collaboration in research and most of the research is composed of 4 authors in the period analyzed (Table 2).

Total	Frequency	Percent	Numb	er of art	icles by	male aut	hors	Num	ber of art	icles by fe	emale au	athors
authors	riequency	reitent	0	1	2	5	11	0	1	2	3	4
1	1	3.3	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
2	8	26.7	50.0%	37.5%	12.5%	0.0%	0.0%	12.5%	37.5%	50.0%	0.0%	0.0%
3	8	26.7	37.5%	37.5%	12.5%	0.0%	12.5%	0.0%	12.5%	50.0%	37.5%	0.0%
4	12	40.0	25.0%	41.7%	33.3%	0.0%	0.0%	0.0%	0.0%	33.3%	41.7%	25.0%
7	1	3.3	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%

Table 2. Research collaboration

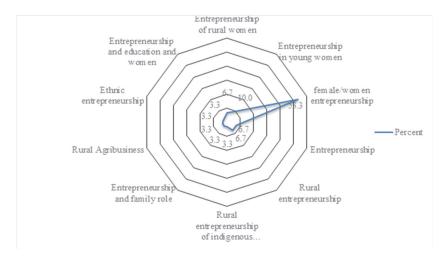
### **Source:** Own elaboration

The results of the regression model (y= a+bix1+b2x2... bnxn+e), where: y=Total number of authors participating in the research; X<sub>1</sub>= No. of female authors, X<sub>2</sub>=No. of male authors, X<sub>3</sub>=objective, X<sub>4</sub>=No. of male authors, X<sub>4</sub>=objective, X<sub>5</sub>=No. of female authors. bnxn+e), where: y=Total number of authors participating in the research; X1=No. of female authors, X<sub>2</sub>=No. of male authors, X<sub>3</sub>=objective, X<sub>4</sub>=citations, X<sub>5</sub>=gender, X<sub>6</sub>=year of publication, X<sub>7</sub>=language, X<sub>8</sub>=subject, X<sub>9</sub>=database; show that: number of female authors, objective, number of citations are the factors that explain the collaboration of different authors in research by 66.9% (R<sup>2</sup>=o. 669, sig. o.oo6) and a relationship of 81.8% (R=o.818); likewise, it is identified through the application of the multivariate regression model, where: Y<sub>1</sub>= Total number of authors, X<sub>2</sub>=language; the participation of authors in research by gender, number of males, X<sub>4</sub>=language; the participation of authors in research by gender, so of males, X<sub>4</sub>=No. of females; X<sub>1</sub>=topic, X<sub>2</sub>=objectives, X<sub>3</sub>=citations, X<sub>4</sub>=language; the participation of authors in research by gender, number of males and females depends on the topic, objectives, citations and language by 97. 3% (R<sup>2</sup>=o.973, sig. o.oo), thus demonstrating that the H1 participation of authors in research is related to topic, objectives, citations, and language, corroborating the theory.

#### 3.2 Quality indicators

### a) Systematization of the individual parts of the article Developed bibliometric research topics

The bibliographic review of the different studies related to bibliometrics on female entrepreneurship in rural areas considers the following research topics: 6,7% Entrepreneurship of rural women; 10% Entrepreneurship in young women; 53,3% female/women entrepreneurship; 6,7% Entrepreneurship; 6,7% Rural entrepreneurship; 3,3% Rural entrepreneurship of indigenous women; 3,3% Entrepreneurship and family role: 3,3% Rural Agribusiness; 3,3% ethnic entrepreneurship; 3,3% Entrepreneurship and education and women (Graphic 4).



**Graphic 4.** Research topics developed in bibliometric studies. **Source:** Own elaboration

In this way, it can be identified that the bibliometric studies mostly develop topics on female entrepreneurship in general, followed by rural entrepreneurship, entrepreneurship, women's rural entrepreneurship and women's entrepreneurship; which means that other aspects of female entrepreneurship can be addressed, mainly related to women's business activity and in the rural area, financing, costs, valuation, production systems, incorporation of new technologies, success and failure; in order to verify the results of research or the projection of new research with unexplored topics.

### 3.3 Research questions formulated in bibliometric studies

One of the important aspects of research is the clarity of the research problem. In this context, it could be identified that 16.7% of the articles formulate a research question in an interrogative form, with research questions such as:

What are the future research directions in women's and youth entrepreneurship? What are the controversial research topics in the women entrepreneurship field? What are the potential future research directions of women's entrepreneurship studies? How to characterize the literature on Indigenous women's participation as a change agent in rural entrepreneurship? What are the links between general entrepreneurship and women's entrepreneurship?

From this set of questions, a variety of unknowns can be identified that are related to indicators

of quality, quantity, and impact, most of which cannot be found on indicators of meta-analysis, which means that there is an ample scope for developing studies on this subject that can lead to the development of new bibliometric research.

#### 3.4 Keywords used in bibliometric research

The data show that the most used keywords in bibliometric research on rural female entrepreneurship are related to women entrepreneurship/gender with 33.3%, followed by entrepreneurship with 16.7% and rural female entrepreneurship with 13.3%, as presented in table 3. This means that the documents can be easily found in the different databases with the mentioned search words, and the investigations are related to those terms.

Table 3. Most used keywords

Keyword	Frequency	Percentage
Rural women entrepreneurship	4	13.3
Entrepreneurship	5	16.7
Rural entrepreneurship	2	6.7
Quantity, quality and structure	1	3.3
Participation of indigenous women in rural entrepreneurship	1	3.3
Women entrepreneurship/gender	10	33.3
"Family * role", "family* support", "parent * role", "parent * support" y "entrepren *	1	3.3
"Women" or "gender" + "female" or "women" or "gender" and "entrepreneur" and "review" or "literature"	1	3.3
Entrepreneuship+machine learning	1	3.3
Sustainable, social, female, digital entrepreneurship	1	3.3
Woman, entrepreneurship, education	1	3.3
Social entrepreneurship, woman	2	6.7
Total	30	100.0

### **Source:** Own elaboration

### 3.5 Structure of published documents

100% of analyzed articles comply with a basic structure comprising: *Introduction*, where the background to the problem of the importance of carrying out bibliometric studies is presented and justified; *methodology*, it shows the different methods used in the research, highlighting for example thematic and content analysis, as well as the PRISMA method for analysis; *results, and discussion*. Their presentation varies according to the method used; however, article numbers, citations, journals, authors, and conclusions can be observed in most of them. This means that the structure in this type of research is also considering the standard model called IMRyD for scientific articles, although it cannot always be adjusted to all research as it mentions "this model does not fit all scientific disciplines, its design is based on an experimental scheme, which arises when conceptualizing the iterative trial-and-error activities of the research and its step-by-step description" (Garcia & Castellanos, 2007, p. 2); however, it allows research to be developed and presented in a structure that readers or other researchers can validate and open up new research.

### a) Methodological aspects used in bibliometric research

Bibliometric research considers the following methodological elements presented in table 4.

Indicadores	Methodological characteristics	Frequency	Percentage
	Bibliometric	26	86.7
Analysis method	Bibliometric/Thematic	3	10.0
methoa	Bibliométrico/Content analysis	1	3.3
	None/no information	16	53.3
	VOSviewer	7	23.3
	SPSS	1	3.3
	Chocomo Cite Space/VOSViewer	1	3.3
Analysis	Boolean Comma Separated Values (CSV) format / VOSViewer	1	3.3
instrument	Cronin Et al. (2008)	1	3.3
	PRISMA /VOSViewer	1	3.3
	H-Index, H- Classics, H-Core	1	3.3
	NetMiner	1	3.3
	SCOPUS	14	46.7
	WOS	9	30
<b></b>	SCOPUS, SCIENCE DIRECT, EBSCO, GOOGLE SCHOLAR	3	10
Database used	SCOPUS, WOS, BUSINESS SOURCE	1	3.3
	EBSCO, PROQUEST, GOOGLE SCHOLAR	1	3.3
	SCOPUS, WOS	2	6.7
	Ninguno/No informa	26	86.7
	Castro y Silva y Teixera (2011)	1	3.3
Analysis model	Cronin et al. (2008)	1	3.3
, , , , , , , , , , , , , , , , , , ,	PRISMA	1	3.3
	Price (1963)	1	3.3
	Publications, quotes	11	36.7
	Publications, topics	8	26.7
	Publications, quotes, topics	5	16.7
Considered	Quantity, quality, structure	1	3.3
variables	Theme, type, methodology, countries	2	6.7
	Articles, publications, peer review	2	6.7
	Networks, citation, co-citation	1	3.3
	Total	28	100,0
	Detail	Minimum	Maximum
	Methodology	1	4
	instrument used	0	8
	Model	0	4
	Databases	1	6
Statistics	Variables considered	1	7
	Number of years investigated	1	116
	Number of articles	25	7320
	Valid N (listwise)	30	

Table 4. Methodological aspects of bibliometric research on women's entrepreneurship

## **Source:** Own elaboration

Where:

- Analysis data method: The methodology allows us to know which elements were considered in the development of the research; in this context, 100% of the authors used the bibliometric methodology; however, there are some differences in the use of the bibliometric method. The data show that 86.7% of the research studies uses bibliometrics alone; in contrast, 10% interchange with thematic analysis; 3.3% with content analysis.
- Instrument used in data analysis: As a data analysis tool, 23.3% used VOSViewer; 3.3%

used SPSS; 3.3% Chocomo CiteSpace/VOSViewer; 3.3% Boolean CommaSeparated Values (CSV); 3.3% (Cronin et al., 2008); 3.3% PRISMA /VOSViewer; 3.3% H-Index, H-Classics, H-Core; and 53.3% did not specify.

- Database used: Data for bibliometric studies are from SCOPUS databases 46.7%; WOS 30%; SCOPUS, SCIENCIA DIRECT, EBSCO, GOOGLE, SCHOLAR 10%; SCOPUS, WOS, BUSINESS SOURCE 3.3%; EBSCO, PROQUEST, GOOGLE SCHOLAR 3.3%; SCOPUS, WOS 6.7%.
- Data analysis model used: 3.3% use the Castro, Silva and Teixera (2011) model; 3.3% Cronin et al. (2008); 3.3% PRISMA; 3.3% Price (1963) and 86.7% do not report.
- Variables considered in the bibliometric analysis: The variables used in bibliometric research directed at rural female entrepreneurship, 36.73% correspond to publications and citations; 26.7% publications and topics; 16.7% publications, citations, and topics; 3.3% topics, type, methodology and countries; 6.7% articles, publications, peer review; 6.7% quantity, quality, and structure; 3.3% networks, citation, and co-citation. This means that there is a variety of variables that are considered in bibliometric studies despite the existence of already defined indicators, which means that there are new variables incorporations for the analysis of bibliometric studies. In conclusion, it can be observed that most of the research under these characteristics analyze according to the number of publications and number of citations.
- Analysis period: An essential element in this type of study is the period; it can be identified that the study period is from 1 year to 116 years, with an average of 28 years, and there is a high variability. In addition, the publication years of this type of research are from 2014 to 2023; and the documentary population considered in each of the research projects varies according to the database from 1990 to 2021.
- Number of considered items: Also, it is observed that a minimum of 25 articles and a maximum of 7,320 documents were considered in the bibliometric research and an average of 739 research, this varies according to the research objective; identifying 7.1% with 192 and 7.1% with 465 research.

In this way, due to the methodological characteristics, the research has the required quality.

### 3.6 Indicators of scientific impact

### a) Number of citations

One of the factors to measure the scientific impact is related to the citations made by other authors to a published research work, because bibliographic citations is a scientific indicator that shows the recognition of the author, where the higher the number of citations, the more important the documents are (Gonzalez de Dios, Moya, & Mateos-Hernandez, 1997) as well as their degree of visibility, use, dissemination or impact, which is why "there is a positive correlation between the number of citations received and scientific quality" (Gonzalez de Dios, Moya, & Mateos-Hernandez, 1997, p. 240); It is also noted that there is no correlation between the most productive authors and the most cited ones. Finally, citations provide information on the knowledge distribution. With regard to bibliometric research on female entrepreneurship in rural areas, they show that the articles published have a minimum of zero citations and a maximum of 177 and an average of 20 citations; It is also observed that 50% of the authors are not cited, mainly those who published in 2020; the rest of the authors are cited from 2 citations onwards, receiving the highest citation the publication made in 2014 by (Pato & Teixeira, 2014) with 177 citations, followed by 126 citations by (Yadav & Unni, 2016a) and 104 citations by (Yadav & Unni, 2016a), (Yadav & Unni, 2016a), (Yadav & Unni, 2016), (Foss et al., 2019), the rest received citations below 35 citations (See table 5).

Publication year	Number of quotations	Authors number	Percentage of authors number (%)
2023	0	16	53.3
2022	1	2	6.7
2020	2	1	3.3
2021	4	1	3.3
2021	5	1	3.3
2021	7	1	3.3
2017	12	1	3.3
2019	25	1	3.3
2020	30	1	3.3
2018	31	1	3.3
2020	35	1	3.3
2019	104	1	3.3
2016	126	1	3.3
2014	177	1	3.3
Total	Total	30	100.0

### Table 5. Citations

#### **Source:** Own elaboration

Likewise, the standard deviation of 43.3 shows that there is dispersion in citations, i.e. not all authors are cited in the same proportion, but it depends on factors, mainly the year of publication by 51.1% (R<sup>2</sup>=0.511, Sig. =0.00, R= 0.715). In the same way, applying the weighted least squares regression model y= a+bx; (Dependent variable (y) = citations, Independent variables X<sub>1</sub>=subject source variable, X<sub>2</sub>=year of publication, X<sub>3</sub>=objective, X<sub>4</sub>=results, X<sub>5</sub>=database, X<sub>6</sub>=language, X<sub>7</sub>=genre, X<sub>8</sub>=methodology, X<sub>9</sub>=instruments), the results show that authors' citations in this type of bibliometric research depends on the mentioned variables by 81.4% (R<sup>2</sup>=0. 814, R=0.902, Sig. 0.00). This shows that H<sub>2</sub> the year of publication, objective, results, database, language, genre, methodology, instruments have a considerable influence on whether an author is cited in published research.

### b) Journals impact

The data show that 28.6% are published in Spanish and 71.4% in English in different journals, identifying that they are published in both languages in the journal Espacios. However, it does not only depend on the impact of the research on the language of the article by 3.1% (R<sup>2</sup>=0.001, R=0.31; Sig. =0.875); but according to the application of the logistic regression model, variables such as: language (Sig. 0.0), gender (sig. 0.0) and variables considered in bibliometric studies (sig. 0.0) are those that have an effect of 96.4%. (Cox and Snell =0.964) of publications in journals. This means that H3 research can be published in Journals that accept articles from different languages, genre and bibliometric indicators, although English is a preferred language for publication; however, it is also related to the availability and accessibility of documents.

## 3.7 Meta-analysis

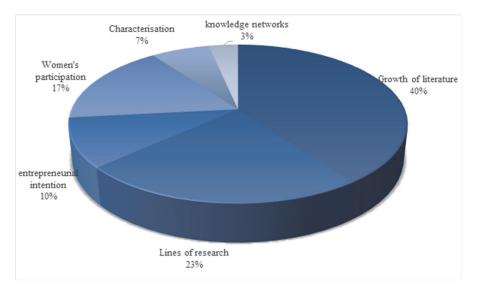
## a) Gender in research

It can be identified that 60% of the research is conducted by both men and women; 30% only by women and 10% by men. Another important aspect is to know the number of male and female authors in each of the research projects; the data show that on average male authors have a participation average 1 author and a minimum of 0 and a maximum of 11; on the other hand, women have an average of 2 authors and a minimum of 0 and a maximum of 4. Thus, it can be identified that women's participation in research is very important and

is higher than that of men in this type of research.

## b) **Objectives set in bibliometric research**

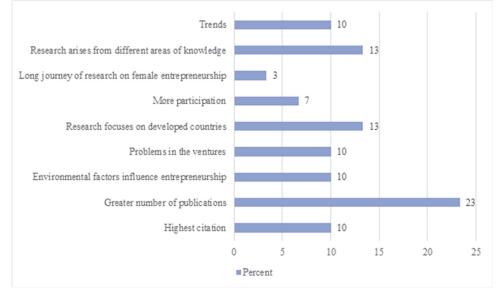
Bibliometric research related to entrepreneurship has different objectives, such as: 1) identifying the growth of literature on entrepreneurship topics by 40%; 2) determining the lines of research 23.3%; 3) literature review on women's participation in entrepreneurship 16.7%; 4) literature review on entrepreneurial intention or entrepreneurship 10%; 5) knowing through mappings the knowledge networks that exist in female entrepreneurship 3.3%; 6) characterizing the articles published on women's entrepreneurship 6.7%, as presented in Graphic 5.



**Graphic 5.** Objectives of Bibliometric Research on Women's Entrepreneurship **Source:** Own elaboration

## c) Research findings

It is identified that the results of the bibliometric research show that: 1) there is a higher number of publications, mainly in India at 23%; 2) research is focused on developed countries due to the amount of research reported in different sources, with one of the countries with the highest number of publications being the United States at 13%; 3) research comes from different areas of knowledge, e.g. Economics, Econometrics, Finance, Social Sciences, Business, Medicines, Arts and Humanities, Biochemistry, Genetics, Molecular Biology, Computer Science, Environmental Science, Engineering, Multidisciplinary, Psychology, Energy, Nursing, Earth and Planetary Sciences, Energy, Health, Mathematics, Neuroscience, Pharmacology, Toxicology at 13%; 4) it is identified that there is a greater citation of the articles by 10%; 5) they show that there are environmental factors that influence entrepreneurship by 101.7%; 6) there is a tendency to continue with research related to female entrepreneurship as well as rural entrepreneurship by 10%; 7) show that there is an increase in the participation of women in entrepreneurship due to different driving and motivational factors (7%); 8) there is a long history of research on female entrepreneurship, which can help to generate theoretical bases (3%); 9) there are problems in studies on entrepreneurship by 10%, showing the need to incorporate bibliometric advances and collaboration between experts (see Graphic 6).



**Graphic 6.** Research results **Source:** Own elaboration

### 4. Discussion

## a) Scientific quality and citations

Studies on bibliometrics mention that "there is a positive correlation between the number of citations received and scientific quality" (Gonzalez de Dios, Moya, & Mateos-Hernandez, 1997, p. 240). 240), in the case of the bibliometrics of bibliometric studies on female entrepreneurship in rural environments, according to the application of the least squares regression model, where y=citations (dependent variable), Subject (source variable); x= Quality (measured by Year of publication, objective, methodology, instrument) (independent variable), show a dependence between the variables of 77.9%. (R<sup>2</sup>=0.779, R=0.882, Sig. 0.00), where the variables that most explain this dependence are: the year published (sig. 0.00) and the objective of the research (sig. 0.004). This corroborates that there is a high relationship and dependence between the citations of the authors and the quality of the research, as also mentioned by other authors. It shows that H4 research quality is a relevant factor for publication and recognition by other authors.

## b) Factors determining the number of publications

The results show after applying the regression model that the number of publications has an increase or decrease depending on the research topic, objective, and number of citations by 54.6%. ( $R^2$ =0.546, R=0.739, Sig. 0.00), the most important being the number of citations that the author will have with the publication of the research at 51.1%. ( $R^2$ =0.511, R=0.715, sig=0.00), however, it is also observed that variables such as: methodology, instruments used, language, gender, objectives, results, and database explain the evolution of publications by 57.8%. ( $R^2$ =0.578, R=0.760, Sig=0.033), which means that publications depend mainly on the number of citations that publications can generate. It is verified that H5 the increase of research depends on the methodology, instruments, language, genre, results, objectives and database (type of journals).

c) Methodological relationship between the research question in bibliometric studies

#### and bibliometrics on women's entrepreneurship

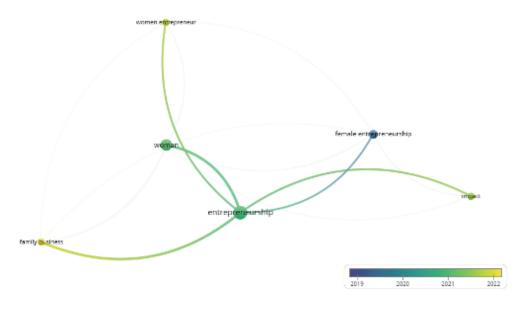
The methodology mentions that there must be a relationship between the research question, the objectives, and the hypotheses, reflected in the results. From this perspective, the Chi-square test was applied to contrast the degree of dependence between the variables research question in relation to the topic, objective, and results from the contingency tables. The research shows that there is no dependence between topic and research question (Pearson's Chi-square =12.774, sig. 0.173); results and research question (Chi-square =5.197, sig. 0.737); methodology and research question (Chi-square=1014, sig. 0.602), but there is dependence between objective and research question (Chi-square=10.859, sig. 0.054). On the other hand, it is verified that there is a dependence between objective and methodology (Chi-square = 23.917, sig. 0.008); however, no degree of dependence can be observed between the objective and the result of the research (Chi-square = 46.760, sig. 0.215).

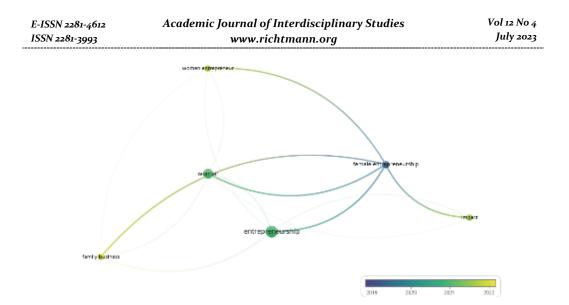
#### d) Gender and publications

The growing importance of women's participation in research is reflected in their degree of involvement, and due to the characteristics of the type of research, it was possible to identify a greater participation of women; however, it cannot be affirmed that publications depend on gender. ( $R^2$ =0.00, R=0.014, sig. 0.945), male involvement ( $R^2$ =0.015, R=0.123, sig. 0.533), ), women's participation ( $R^2$ =0.00, R=0.021, sig. 0.916), but depend on other variables related to: research question, objective, research topic, number of citations, methodology, data collection instrument, article language, keywords, databases or journals where they are published by 63.8%. ( $R^2$ =0.638, R=0.799, sig. 0.023).

#### e) Trend of bibliometric research on female rural entrepreneurship

The results of the application of the data in VOSviewer allow us to identify that bibliometric research on rural female entrepreneurship is mainly related to two clusters, the first: it considers research related to entrepreneurship, family business, women, and women entrepreneurs; in the second, with: female entrepreneurship, impact. In addition, it is observed that there is a close relationship between studies related to entrepreneurship and women and impact mainly, which means that there are no studies related to success and failure of entrepreneurship or entrepreneurs, marketing application, planning, employment or unemployment, field rural, among other aspects, as presented in the Graphic 7.





**Graphic 7.** Trend of bibliometric research on female rural entrepreneurship **Source:** Own elaboration

In this way, it can be observed that the trend of the different studies carried out was mostly significant as of 2019 and in 2022 importance has been given to studies of rural female enterprises related as a family business. This means that H6 the trend of research is related to rural entrepreneurship, impact and the family.

f) Trend and recommendations of bibliometric research related to women's entrepreneurship

Knowing the impact of bibliometric research is important and its trend, the results show that this type of research has an important impact about entrepreneurship, as each year, new research is emerging and increasing. According to the application of the multinomial logit regression model (dependent variable = number of publications per year, independent variables = number of citations, research topic) the results show a dependence (Chi-square =126.023, sig. =0.001) and there is a predicted probability that the trend or increase in publications from 2022 onwards would be on average 2 publications, at least none and at most 5 publications; on the other hand, if we consider as dependent variable= Number of publications per year; independent variables=Number of male authors, Number of female authors, the trend of growth in publications does not depend on the researchers gender (Chi-square =10.225, sig. 0.596).

In relation to the recommendations, the authors who develop this type of research (see table 6), recommend in general terms that it is important to continue to deepen studies on entrepreneurship, female entrepreneurship, new authors, deepen national and transnational studies, in developing or underdeveloped countries, use mixed methods, and bibliometric research should continue (Slavinski, Todorovic, & Vukmirovic, 2020), because the generation of new knowledge in the field of entrepreneurship depends on this. Therefore, the trend of this type of research is and should be growing.

Table 6	. Recommen	dations for	r future	research
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Author	Future research recommendations		
(Parmar & Gahlawat, 2020)	Fostering entrepreneurship		
$\left[ \left( A \sigma \sigma \sigma r v \right) V \left[ \rho h \sigma \right] \sigma \sigma \sigma 1 \right]$	Research on the impact of entrepreneurship education, microcredit, and information technology on rural women's entrepreneurship.		

Author	Future research recommendations
(Garavito et al., 2021)	To study the factors that influence the entrepreneurial intentions of young university women.
(Barbosa et al., 2020)	Analyzing scientific productions on women's entrepreneurship
(Arias et al., 2016)	Analyze the entry of new authors
(Cabeza, 2019)	Periods of analysis, correlations of samples in analyses with other themes and trends should be increased.
(Pato & Teixeira, 2014)	Using least developed and underdeveloped countries in studies
(Yadav & Unni, 2016b)	Transnational borders and the construction of research networks should be studied.
(Correa, y otros 2021)	Mixed studies on women entrepreneurs should be carried out.
(Slavinski, Todorovic y Vukmirovic 2020)	More research is needed in the field of bibliometrics.

Source: Own elaboration

#### 5. Conclusions

Therefore, it is concluded that bibliometric research on entrepreneurship has not yet addressed other topics beyond a generalization of female entrepreneurship; for example, studies on entrepreneurship considering the gender approach, rural geographic spaces, ICTs, training, financing, effects, causes, successes, and failures. This allows us to detect that there is a wide field for developing different research not only at the case level, but also at the country level, because, for example in the case of Ecuador, we were unable to identify bibliometric studies that analyze the different aspects and with a gender focus and a spatial intervention of the rural sphere on women's entrepreneurship. On the other hand, research is focused on showing the results of female entrepreneurship in urban areas and very little or almost nothing in rural areas, mainly in Latin American countries. Likewise, it is observed that they have a recent trend, which would contribute to obtaining indicators and planning future research, as well as contributing to the definition of policies, knowing the state of the discipline and its progress.

No studies on meta-analysis indicators can be found, which means that there is a wide field for developing research on this aspect that can project the development of new research. The participation of researchers in bibliometric research related to entrepreneurship, female and rural, depends directly on the topic, objectives, and citations and indirectly on the language, without neglecting the databases. It is also verified that the citations of the authors depend on the quality of the research, mainly considering the year of publication and the objective in bibliometric research of bibliometric studies on female entrepreneurship in rural environments.

The evolution of bibliometric publications on bibliometric studies is related to the topic, citations, and objectives, with the number of citations generated by the recognition of the research by other authors. This means that the tendency to conduct this type of research is related to the problems of entrepreneurship in rural areas where women are involved.

The productivity of the authors is relevant in relation to others, which means that scientific production related to rural women's entrepreneurship should be generated from different areas of knowledge, cases, and countries, to continue generating new theories or paradigms.

Bibliometric studies show that there is a dependence between research question and objectives, as well as between objectives and methodology, but the relationship between research question, results and methodology is not statistically observed, opening up a wide spectrum for methodological research on this type of studies. The impact of journals and their publications is not statistically dependent on language, but on the information availability and accessibility.

There is no relationship or dependence between gender, nor the number of male or female participation in research for publication, but it is related to factors such as: research question, objective, research topic, number of citations, methodology, data collection instrument, article language, keywords, databases, or journals.

Finally, there is a significant trend for the increase of research and its publication in journals in the different databases according to the number of citations, since through this, the degree of importance and impact of this type of research can be observed. It is therefore recommended to continue developing this type of bibliometric research that shows the development of women's entrepreneurship in rural areas from different angles, considering entrepreneurship, financing, costs and valuation of enterprises, success and failure, associativity, and the incorporation of new technologies.

## References

- Aggarval, M., & Johal, R. (2021). Rural women entrepreneurship: a systematic literature review and beyond. *World Journal of Science Technology and Sustainable Development*, 18(4), 373-392. https://doi.org/10.1108/WJSTSD-04-2021-0039.
- Ayaviri-Nina, D.; Cáceres-Guzmán, J.; Quispe Fernández, G M.; Maldonado-Nuñez, A. I. (2023). The Determinants of Success in Entrepreneurship: A Study in the Urban Area of Ecuador. Sustainability, 15(6), 5277. https://doi.org/10.3390/su15065277
- Arias, A. V., Restrepo, I. M., & Restrepo, A. M. (2016). University students' entrepreneurial intentions: A bibliometric study. *Intangible Capital*, 12(4), 881–922. https://doi.org/10.3926/ic.730
- Barbosa, C., Dos Santos, I., Santos, J., De Jesus, L., & Marques, V. (2020). Análisis bibliométrico de producción científica relacionada con el emprendimiento feminino. *Razón y Palabra*, 24(109), 62–78. https://doi.org/10.26807/rp.v24i109.1645
- Bettany-Saltikov, J. (2010). Learning how to undertake a systematic reviw:part 1. Nurs Stand, 18-24. doi: 10.7748/ns2010.08.24.50.47.c7939. PMID: 20865948.
- Bonilla-Carchi, S. M., Elena, S., & Elena, S. (2021). "Análise bibliométrica da produção científica sobre o agronegócio no Equador". *Dominio de Las Ciencias*, 7(3), 225–238. https://doi.org/10.23857/dc.v7i3.1910
- Cabeza, L. (2019). Bibliometric approach to research in entrepreneurship. Tesis Doctoral-Universidad de Córdoba. España
- Canela, J., & Ollé, J. (1990). Muchos y bien avenidos: el número de autores en revistas clínicas. *Med Clin*, 2(94): 197-198.
- Camargo, M., Bezerra, M., dos Santos, A., Camargo, M., Hahn, U., Ventura, M., & Conte, P. (2020). Approaches to Entrepreneurship: Bibliometric Study of Scientific Production at Scopus Base. *Revista Gestão Inovação e Tecnologias*, 10(4), 5698–5714. https://doi.org/10.7198/geintec.v1014.1502
- Cardella, G. M., Hernández-Sánchez, B. R., & Sánchez-García, J. C. (2020). Women Entrepreneurship: A Systematic Review to Outline the Boundaries of Scientific Literature. *Frontiers in Psychology*, 11(2), 1–18. https://doi.org/10.3389/fpsyg.2020.01557
- Cardella, G. M., Hernández-Sánchez, B. R., & Sánchez-García, J. C. (2020). Entrepreneurship and Family Role: A Systematic Review of a Growing Research. *Frontiers in Psychology*, 10(January), 1–17. https://doi.org/10.3389/fpsyg.2019.02939
- Castillo, A. M., Ordoñez, D. Y., Giraldo, L. C., & Gallego, D. L. (2020). Participación de la mujer indígena en el emprendimiento rural como agente de cambio. Una revisión de literatura. *Revista Espacios*, 41(45), 257–272. https://doi.org/10.48082/espacios-a20v41143p19
- Correa, V., Da Silva, F., Mendonca, R., & Queiroz, M. (2021). Female Entrepreneurship in Emerging and Developing Countries: A Systematic Review of the Literature. *International Journal of Gender and Entrepreneurship*, (3), 134-151. DOI:10.1108/IJGE-08-2021-0142.
- Deng, W., Liang, Q., Li, J., & Wang, W. (2021). Science mapping: a bibliometric analysis of female entrepreneurship studies. *Gender in Management*, 36(1), 61-86. https://doi.org/10.1108/GM-12-2019-0240
- Ferreira, J., Fernandes, C., Peris-Ortiz, M., & Ratten, V. (2017). Female entrepreneurship: a co-citation analysis. International Journal of Entrepreneurship and Small Business, 31(2), 325-340. Doi: 10.1504/IJESB.2017.084095.
- Figueroa, N. (2020). Revisión sistemátiva de bibliografia con análisis de tendencias de investigación: unas pautas generales ejemplificadas. *Revista IDGIP*, 1(3), 64-76. https://revistas.escuelaing.edu.co/index.php/idgip/artic le/view/169/95.
- Foss, L., Henry, C., Ahl, H., & Mikalsen, G. (2019). Women's entrepreneurship policy research: a 30-year review of the evidence. *Small Business Economics*, 53(2), 409–429. https://doi.org/10.1007/s1187-018-9993-8
- Garavito Hernández, Y., Calderón Campos, J. A., & Ramírez Torres, W. E. (2021). "Emprendimiento en mujeres y jóvenes: una revisión de la literatura". *Lúmina*, 22(2), 1–25. https://doi.org/10.30554/lumina.v22.n2.3869.2021

- Garcia, J., & Castellanos, M. (2007). La difusión de las investigaciones y el formatoIMRyD: Una pequisa a propósito de la lectura crítica de los artículos científicos. *Acimed*, (2), 1-11.
- García-Rio, E., Baena-Luna, P., Sanchéz-Torné, I., & Pérez-Suarez, M. (2021). Emprendimiento en tiempos de COVID - 19: Unarevición biblimétrica. *Revista de Ciencias Sociales*, XXVII(4), 76–93. https://doi.org/DOI: https://doi.org/10.31876/rcs.v27i
- Gonzalez de Dios, J., Moya, M., & Mateos-Hernández, M. A. (1997). "Indicadores bibliometricos: Caracteristicas y limitaciones en el analisis de la actividad científica". *Anales Espanoles de Pediatria*, 47(3), 235–244. https://www.aeped.es/anales/47/3/indicadores-bibliometricos-caracteristicas-y-limitaciones-en-an
- Hooda, R., & Singh, S. (2021). A Bibliometric Analysis Study of Women Entrepreneurship Literature from. UGC Care Journal, 44(1), 108–112.
- Indart, N., Hapsari, N., Lukito-Budi, A., & Virgosita, R. (2021). Quo vadis, ethnic entrepreneurship? A bibliometric analysis of ethnic entrepreneurship in growing markets. *Journal of Entrepreneurship in Emerging Economies*, 13(3), 427-458. DOI:10.1108/JEEE-04-2020-0080.
- Liberati, A., Galttman, D., Tetzalff, J., Mulrow, C., Gotzsche, P., Aloannidis, J., . . . Moher, D. (2009). The PRISMA statement for reporting systematic reviews andmeta-analyses of studies that evaluate healthcare interventions: explanation andelaboration. *Research Methodos & Reporting*, 3(4), 339-353. .doi: https://doi.org/10.1136/bmj.b2700.
- Lotka, A. (1926). The frequencydistribution of sciencitific productivvity. *JWash Acad Sci*, (16), 317-323. https://www.jstor.org/stable/pdf/24529203.pdf.
- Machado, A. D. B., & Sousa, M. J. (2020). Contributions of Women Entrepreneurship Studies for Policymakers. Advances in Engineering Education, (17), 53-57. https://doi.org/10.37394/232010.2020.17.6
- Monsalve, G., Echaverría, J., & Alvárez, S. (2020). Estudio cienciométrico y bibliométrico como instrumento de análisis de tendencias en educación superior. Caso ingeniería industrial y programas afines. *Educación Educación*, 41(28), 178-201. https://www.revistaespacios.com
- Moreira, J., Marques, C. S., Braga, A., & Ratten, V. (2019). A systematic review of women's entrepreneurship and internationalization literature. *Thunderbird International Business Review*, 61(4), 635–648. https://doi.org/10 .1002/tie.22045
- Ortiz, V. V., Oliveros, C. E. C., & Guerrero, B. B. (2014). Análisis bibliométrico del campo de formación de emprendedores. *Cuadernos de Administración*, (30), 44–53. http://www.redalyc.org/articulo.oa?id=22 5033236005
- Off, R., & Baltes, G. (2021). Glimpse on women in entrepreneurial context a machine learning based literature review. (*IEEE International Conference on Engineering, Technology and Innovation, ICE/ITMC* 2021-Proceedings), 1-9. doi: 10.1109/ICE/ITMC52061.2021.9570241.
- Page, M., Mckenzie, J., Bossuyt, P., Boutron, I., Hoffmann, T., Mulrow, C., Shamseer, L., Tetzlaff, J., Akl, E., Brennan, S., Chou, R., Glanville, J., Grimshaw, J., Hrobjartsson, A., Lalu, M., Li, T., Loder, E., Mayo-Wilson, E., McDonal, S. and Moher, D. (2021). The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *Revista Espanola de Cardiologia*, 74(9), 790–799. https://doi.org/10.1016/j.recesp.2021 .06.016
- Parmar, S., & Gahlawat, S. (2020). Thirty Years Research Output on Rural Women Entrepreneurship: A Bibliometric Analysis of Publications (1989-2018). *Library Philosophy and Practice*, 1(31,: 3824. https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=7139&context=libphilprac
- Pato, M. L., & Teixeira, A. A. C. (2014). Twenty Years of Rural Entrepreneurship: A Bibliometric Survey. *Sociologia Ruralis*, 516(1), 3–28. https://doi.org/10.111/soru.12058
- Pato, M. L., & Teixeira, A. A. C. (2016). Twenty Years of Rural Entrepreneurship: A Bibliometric Survey. *Sociologia Ruralis*, 56(1), 3–28. https://doi.org/10.1111/soru.12058
- Santos, G., Marques, C., & ferreira, J. (2018). A look back over the past 40 years of female entrepreneurship: mapping knowledge networks. *Scientometrics*, 2(115), 953-987. https://doi.org/10.1007/s1192-018-2705-y.
- Shrivastava, U., & Dwivedi, A. (2021). Manifestations of rural entrepreneurship: the journey so far and future pathways. *Managemet Review Quarterly*, (71), 753-781. https://doi.org/10.1007/s11301-020-00199-1.
- Slavinski, T., Todorovic, M., & Vukmirovic, V. (2020). Women, entrepreneurship and education: Descriptive bibliometric analysis based on scopus database. *Journal of Women's Entrepreneurship & Education*, 3(4), 181-201.
- Shrivastava, U., & Kumar, A. (2021). Manifestations of rural entrepreneurship: the journey so far and future pathways. *Management Review Quarterly*, 71(4), 753–781. https://doi.org/10.1007/s11301-020-00199-1
- Yadav, V., & Unni, J. (2016). Women entrepreneurship: research review and future directions. *Journal of Global Entrepreneurship Research*, 6(1), 96-113 https://doi.org/10.1186/s40497-016-0055-x