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# **Mapping of Women's Empowerment Research Performance in the Global Perspectives: A Scientometric Study**

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## **Abstract**

The present study attempts to highlight the research output generated at the Global level in Women's Empowerment research during the study period 2011-2020. A total number of 4511 documents has been retrieved from the Web of Science database. The study focuses on various aspects of the Women's Empowerment research such as the growth of publications, most relevant sources, most prolific authors, document types, corresponding authors country, authors keywords, most relevant affiliations involved. The highest number of publications is in 2020 with 763 records, but the lowest number of publications in 2011 i.e. with 231 records. The majority of publications were written by Yount KM 33 articles. The USA was found to be leading the research with 1563 articles. This study indicates the growth of Women's Empowerment research across the global perspective of citation count, collaboration rate, and so on. This study is based on the Web of Science (WoS) database. Further research using other databases such as Scopus, PubMed, Chemical abstract, and Lens.org could be attempted.

**Keywords:** Women's Empowerment, Research Performance, Global Perspectives, Bibliometric Package, h index, g index, m index, and Scientometric

## **1. Introduction**

Women's Empowerment is a world issue. The conception of Women's Empowerment was presented at the international women's conference at Naibori in 1985. Education is the platform of Women's Empowerment whereas it allows them to reply to the challenges to confront their traditional role and change their life. The process of empowerment is multidimensional, and it permits women to understand their full doom and ability in all globe of life. Women's Empowerment is primary to the achievement of the three goals of equality, development, and

social justice. Women's Empowerment is a multifaceted conception, helps women to have the power, capable to make decisions in their life (Alemu et al., 2018). Women's Empowerment by developing human abilities through quality education on values, making them responsible citizens who can work for the development of the society and develop sectarian harmony in the multi-cultural reality and multi-religious of India. In the present scenario, the speedy growth of industrialization, globalization, and change in social law has contributed to the conversion of status or visibility and location of women across the world (Huis et al., 2019). Developing countries like India is a rapidly growing economy in the sphere and provides vast opportunities to women as businesspersons, political representatives, and professionals. The legislation in India introduced a new law in 2013 and built it compulsory for each company to have at least one woman on the board as a director leads to the increase of women's visibility but not that much significantly. The contribution of women in work and business is slightly low in developing countries whereas compared to developed countries. For instance, women involvement in India is 31.6%, USA-45%, UK-43%, Canada-42%, France-32%, Indonesia-40%, both Sri Lanka and Brazil is 35% (Sinha et al., 2019). More, the overall impact of empowering women will grow social and financial stability among rural and urban areas in terms of standard of living and facilitates education to their children, and also emphasizes the impact of government (Chakraborty et al., 2019).

## **2. Review of Literature**

The present study considers the scientometric technique to understand a shared understanding of the researchers of the field of Women's Empowerment research. There are numerous techniques like co-citation, topic co-occurrence, citation, bibliographic coupling, and overlay visualization used in the scientometric analysis. It helps to understand the in-depth information regarding women's empowerment in the business and commerce field. Likewise, scientometric analysis as a quantitative approach has broadly used to detect hopeful or developing research areas of a specific field of research such as the evolution of entrepreneurship (Chandra, 2018). The other study has been carried out by (Kumar, 2020) a scientometric analysis of the Women's Empowerment of 391 articles in business and management studies from the Web of Science database during the period of 1985-2018. There are various techniques such as co-occurrence, co-citation, and overlay visualization. (Olawumi & Chan, 2018) conducted a scientometric review of global trend and structure of sustainability research of 2094 bibliographic records from the Web of Science database

during the period of 1991-2016. The study aims to analyze such as co-author, co-word, co-citation, and clusters. The highest contributions of sustainability research were originated primarily from the United States, China, United Kingdom, and Canada, while the study generated 21 co-citation clusters. (Wang et al., 2019) conducted a bibliometric analysis of the global performance and development of sustainable city research during the period of 1992 – 2016 in the Web of Science database. The study found that use of visualization tools, such as Science of Science (Sci2), alluvial diagram and Gephi and analysis of keywords plus and author keywords China was the first rank in natural science research and the USA was also leading country in the social science research. (Velmurugan, 2019) has observed neurology research on the global level as per the scientific publications during the period of 2006-2015 in the Web of Science core database. The study found a total of 23,335 publications were published in the area of neurology by global researchers, the maximum number of publications 3357 were published in 2015, most prolific authors, highest productive countries, language-wise distribution of documents, and highest productive institutes. (Rahaman et al., 2020) conducts a scientometric study of 3212 records in the oceanographic research output at the world perspective during the timespan 2015-2019 in the Web of Science database. The study focuses on the growth of publications, documents type, and prolific authors. The maximum number of publications was in the year 2016 with 1179 articles and the USA was the leading country research publication with 1144 records. The other study has been carried out by (Santosh et al., 2018) a scientometric analysis of 6886 articles published in J-gateplus database on organic farming during the period of 1980-2018. They have focused on several aspects of the growth of literature, relative growth rate, topmost productive journals, year-wise publication, country-wise publication of organic farming.

### **3. Objectives**

The primary objective of the present study is to study the growth of research output on Women's Empowerment research from Global perspectives. Besides, the analysis has performed:

- To find out the type of documents containing Women's Empowerment research output during 2011-2020,
- To analyze the year-wise distribution and growth of literature on Women's Empowerment at Global levels during 2011-2020,

- To determine the most prolific authors exploring Women’s Empowerment,
- To analyze the top sources preferred by authors for publishing Women’s Empowerment research,
- To identify the country wise collaborative distribution of Women’s Empowerment research
- To identify the top institutions researching Women’s Empowerment.

#### 4. Methodology

The present study is a scientometric analysis of Women’s Empowerment research publications. A total of 4511 records have been retrieved from the Web of Science database in the ‘.txt’ format covering the period (2011-2020). The search string used for data extraction is TS= “Women’s Empowerment”. This search has been refined to limit the period from 2011 to 2020. The dataset collection procedure has completed on February 22, 2021. Data filtering has been performed manually to remove unrelated record entries. Bibliometrix Package in RStudio software has been used for analyzing the data and it has also been used for tabulation and visualization of Results.

#### 5. Data Analysis and Interpretation

##### 5.1 Type of Publications

Different kind of publications in which research work on Women’s Empowerment Research output is contributed during last 10 years is listed in Table 1. Out of total publications 3897 (86.3 %) are research articles, 218 (4.8 %) are review, 193 (4.2 %) are early access, 68(1.5 %) are meeting abstract, 53 (1.7 %) are editorial material, 33 (0.7 %) are book review, 27 (0.5 %) are Proceeding paper, 9 (0.1 %) are Letter, 6 are correction, 5 are book chapter and 1 are data paper and news item.

**Table 1: Publication Types**

S.No.	Documents	Records	Percentage
1	Article	3897	86.3
2	Review	218	4.8
3	Early Access	193	4.2
4	Meeting Abstract	68	1.5
5	Editorial Material	53	1.7

6	Book Review	33	0.7
7	Proceedings Paper	27	0.5
8	Letter	9	0.1
9	Correction	6	0.1
10	Book Chapter	5	0.1
11	Data Paper	1	0
12	News Item	1	0
	Total	4511	100

## 5.2 Year Wise Distribution of Research Publications

Table 2 indicates that during the period of 10 years spanned between 2011 and 2020, a total of 4511 publications were published by Women's Empowerment researcher. The maximum number is found to be 763 (16.91%) in 2020 followed by 748 (16.58%) in 2019 and 560 (12.41%) in 2018. It is also found from the table that the lowest number is 231 (5.12%) records in 2011. It is supposed from the analysis that there is a most productive year of 2020,2019, and 2018 on Women's Empowerment research. It is very apparent that the highest Annual Ratio of Growth occurs in the year 2019 (133.57%) followed by 2014 (124.57%), 2018 (123.89%), and 2012 (122.51%) on Women's Empowerment research.

**Table 2: Distribution of Papers during 2011-2020**

Year	Publications	%	% of ARoG	% of AGR
2011	231	5.12	--	--
2012	283	6.27	122.51%	-22.51%
2013	293	6.49	103.53%	-3.53%
2014	365	8.09	124.57%	-24.57%
2015	386	8.55	105.75%	-5.75%
2016	430	9.53	111.40%	-11.40%
2017	452	10.01	105.12%	-5.12%
2018	560	12.41	123.89%	-23.89%
2019	748	16.58	133.57%	-33.57%

2020	763	16.91	102.01%	-2.01%
Total	4511	100.00		

**ARoG = “Annual Ratio of Growth”, AGR= “Annual Growth Rate”**

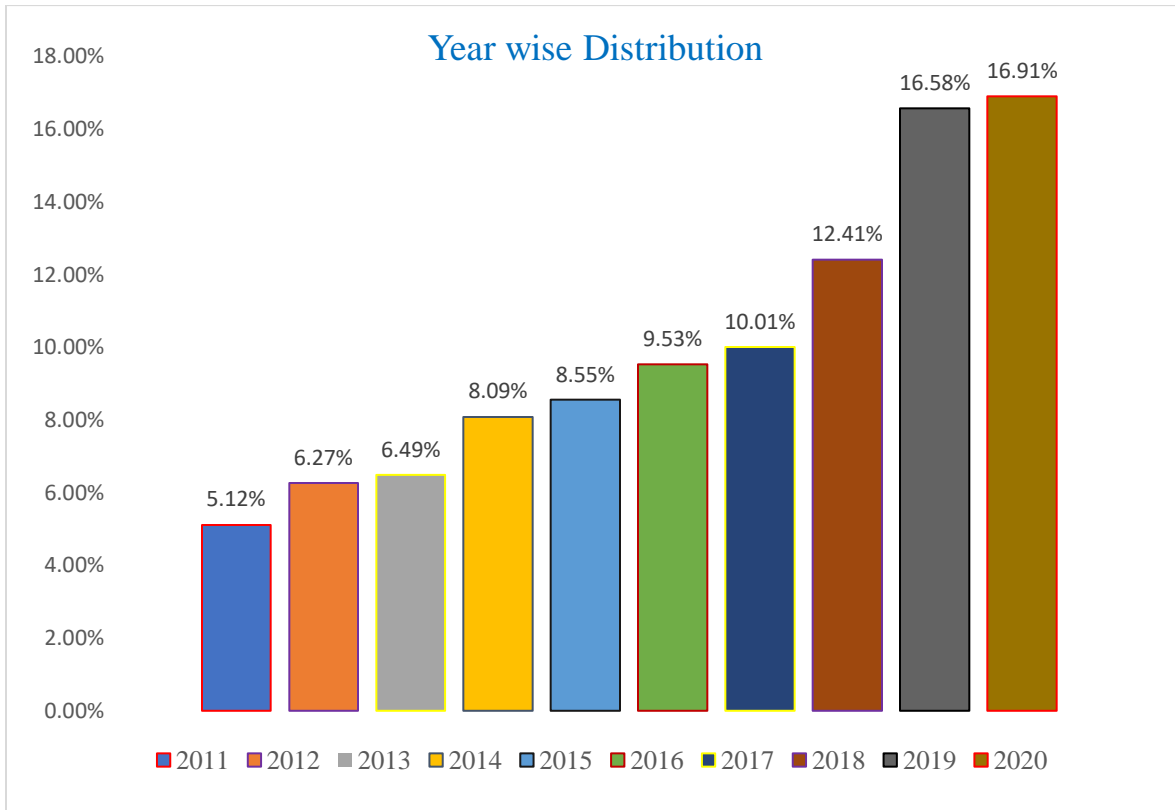


Figure: 1 Year wise distribution of Publications

### 5.3 Most Top 20 Journals Preferred for Publication

The total number of 4511 publications on Women’s Empowerment research from 2011 to 2020 appeared in different sources. The top 20 journals preferred for women empower publications are listed in Table 3 during the period under study. World Development has published the highest (91) publications on Women’s Empowerment, followed by Plos One (86). According to the journals preferred for publication output from table 3 the journal wise distribution of research documents, World Development has the highest number of research documents 91 with 1986 of total citation score and 24, 41, and 2.181 h index, g index, and m index respectively and being prominent among the 20 journals and it stood in the first position. Plos One has 86 research documents, and it stood

in the second position with 584 of total citation score, and 15, 20, 1.666 h index, g index, and m index score were scaled. It is followed by BMC Public Health with 71 records, and it stood in the third position along with 945 total citation scores and 18, 26, and 1.636 h, g, and m index scores measured.

**Table 3: Top 20 Sources of Publications**

S.No.	Source of Publications	NP	TC	h-index	g-index	m-index
1	World Development	91	1986	24	41	2.181
2	Plos One	86	584	15	20	1.666
3	BMC Public Health	71	945	18	26	1.636
4	Womens Studies International Forum	65	486	12	19	1.09
5	BMC Pregnancy and Childbirth	52	819	17	26	1.7
6	Journal of Interpersonal Violence	48	357	11	18	0
7	Culture Health & Sexuality	43	271	10	14	0
8	Journal of Development Studies	43	348	11	17	0
9	Feminist Economics	42	391	12	18	1.333
10	Violence Against Women	41	342	10	17	0
11	Reproductive Health	39	359	12	17	1.09
12	Gender Place and Culture	38	231	10	13	0
13	BMC Womens Health	37	317	11	15	1
14	Social Science & Medicine	37	613	14	24	1.272
15	Asian Journal of Womens Studies	36	75	5	6	0.454
16	Sustainability	31	112	7	9	0.636
17	Journal of Family Violence	30	176	7	12	0
18	International Journal of Environmental Research and Public Health	28	104	5	9	0.454
19	Affilia-Journal of Women and Social Work	27	72	5	7	0
20	Indian Journal of Gender Studies	27	80	5	7	0.454



NP= “Number of Publications”, TC= “Total Citations”

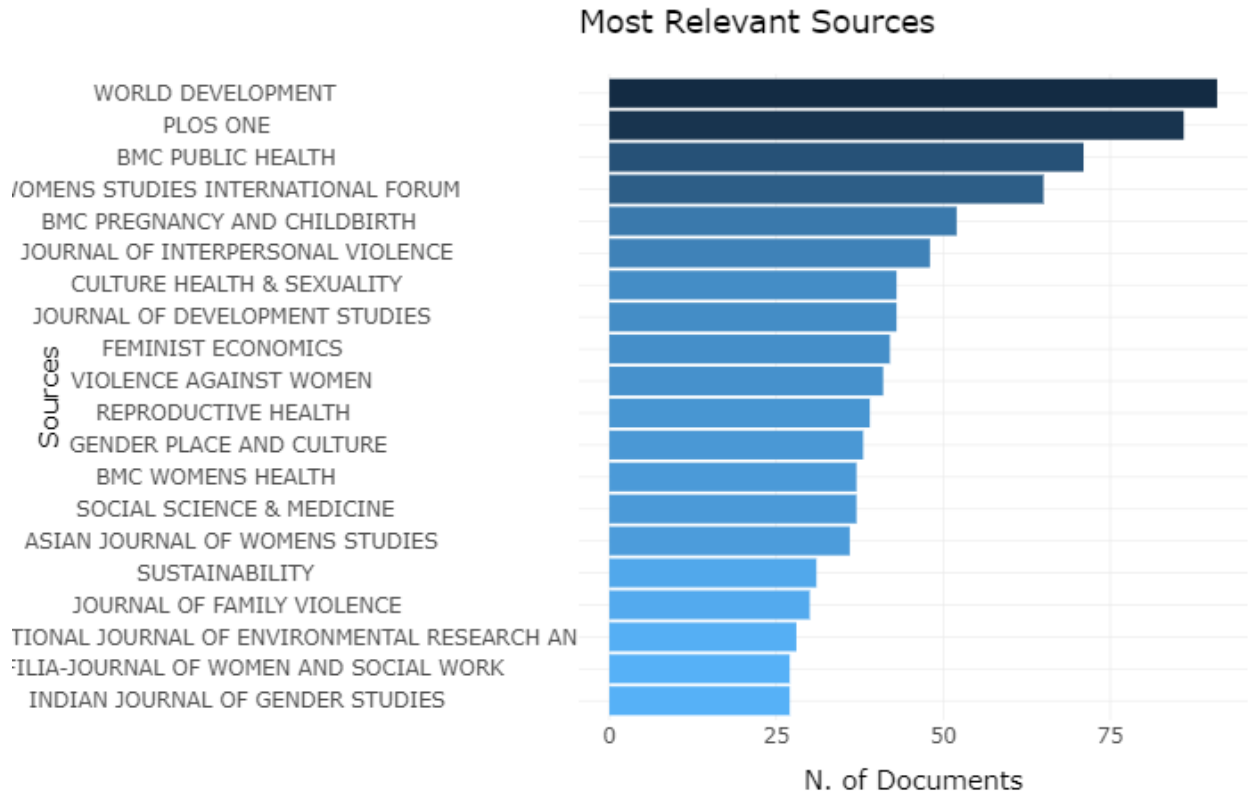


Figure: 2 Most Relevant Sources

#### 5.4 Most Prolific Authors of Women’s Empowerment Research

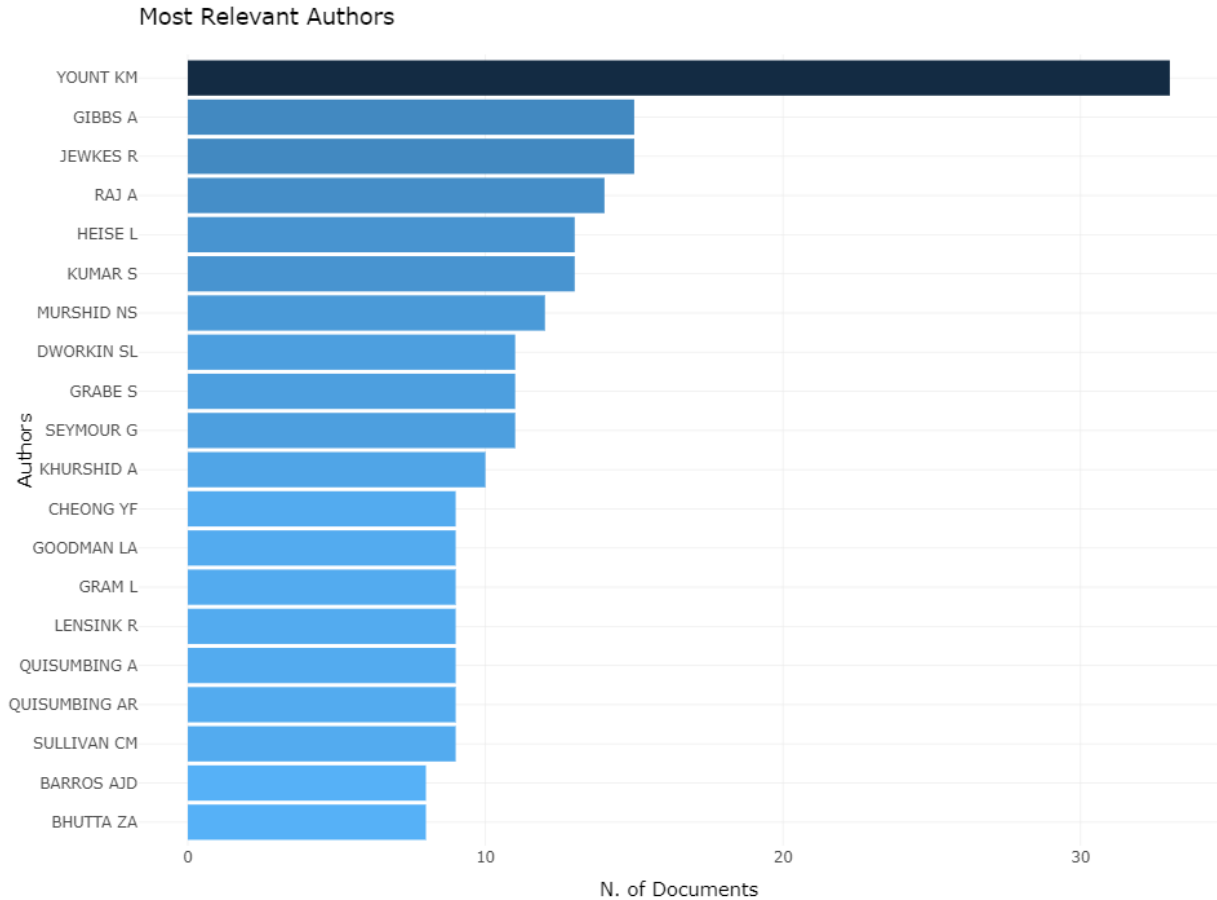
The list of the top 20 authors who produced the highest contribution to research output on Women’s Empowerment in Global perspectives is given in Table 4. In terms of the number of publications, Yount KM is the most productive author with 33 publications, followed by Gibbs A and Jewkes R 15, and Raj A and Heise L 13 publications. It is also noted that 1 out of 20 prolific authors contributed more than thirty-three (33) research publications each while 19 authors contributed more than eight (8) journals each. The h index is highest for Yount KM (11), followed by Heise L (10), and Dworkin SL (9). The data set puts forth the authors Yount KM with 16 g-index, Gibbs A with 14 g-index, and Jewkes R with 13 g-index. Yount KM (1.375), Heise L (1.25), Raj A (1.143) are having the highest m- index, respectively.

Table 4: Most Prolific Authors

S.No.	Author	NP	TC	h-index	g-index	m-index
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1	Yount KM	33	307	11	16	1.375
2	Gibbs A	15	208	6	14	0
3	Jewkes R	15	182	6	13	0
4	Raj A	13	284	8	13	1.143
5	Heise L	13	366	10	13	1.25
6	Kumar S	10	47	5	6	0.455
7	Murshid NS	12	150	4	12	0.4
8	Dworkin SL	11	219	9	11	0.818
9	Grabe S	11	179	7	11	0.7
10	Seymour G	11	305	5	11	0
11	Khurshid A	10	44	3	6	0.429
12	Cheong YF	9	107	6	9	1
13	Goodman LA	9	164	6	9	0
14	Gram L	9	35	4	5	0.8
15	Lensink R	9	37	4	6	0
16	Quisumbing A	9	284	5	9	0
17	Quisumbing AR	9	490	7	9	0.875
18	Sullivan CM	9	105	6	9	0.545
19	Barros AJD	8	283	6	8	0.857
20	Bhutta ZA	8	1318	5	8	0.556

**NP= “Number of Publications”, TC= “Total Citations”**



**Figure:3 Most Relevant Authors**

### **5.6 Top 20 Corresponding Authors Country and Publications**

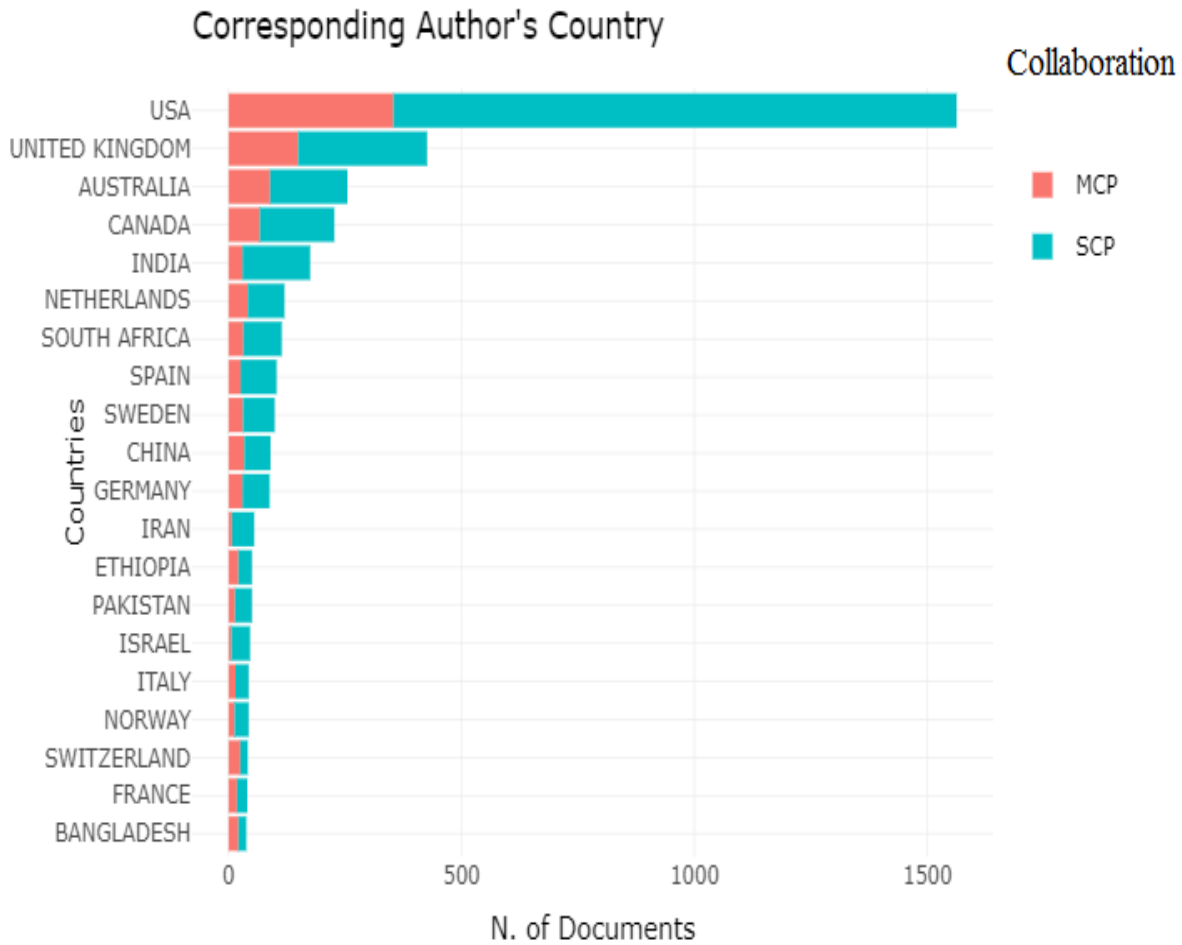
Table 5 reveals the top 20 corresponding authors' countries with their number of publications and analysis of a number of single country publications (SCP), multiple country publications (MCP), and multiple country publication Ratio. The USA was the first position with a total of 1563 publications out of those 1209 were single country publications (SCP) and 354 were multiple country publications (MCP) with an MCP ratio of 0.226 which shows the highest number of publications on Women's Empowerment research in the United States. The United Kingdom was in the second position with a total of 426 publications out of those 277 were single country publications and 149 were multiple country publications with an MCP ratio of 0.35. The high multiple country publications (MCP) ratio shows the highest collaboration of a country with other countries. Australia and Canada respectively were the third and fourth corresponding countries in the list with 89 out of 255 (MCP 0.349) and 67 out of 227 (MCP 0.295) multiple country

publications. Table 5 is displaying the list of the top 20 corresponding authors' countries and document publications. Figure 4 shows the graphical representation of the corresponding authors' country and document publications

**Table 5. Top 20 Corresponding Authors Country and Documents**

<b>Country</b>	<b>Articles</b>	<b>Frequency</b>	<b>SCP</b>	<b>MCP</b>	<b>MCP-Ratio</b>
USA	1563	0.35547	1209	354	0.226
United Kingdom	426	0.096884	277	149	0.35
Australia	255	0.057994	166	89	0.349
Canada	227	0.051626	160	67	0.295
India	175	0.0398	145	30	0.171
Netherlands	120	0.027291	79	41	0.342
South Africa	114	0.025927	82	32	0.281
Spain	103	0.023425	77	26	0.252
Sweden	99	0.022515	68	31	0.313
China	90	0.020469	56	34	0.378
Germany	88	0.020014	58	30	0.341
Iran	55	0.012509	48	7	0.127
Ethiopia	50	0.011371	29	21	0.42
Pakistan	50	0.011371	36	14	0.28
Israel	46	0.010462	40	6	0.13
Italy	43	0.009779	28	15	0.349
Norway	43	0.009779	30	13	0.302
Switzerland	41	0.009325	16	25	0.61
France	40	0.009097	22	18	0.45
Bangladesh	38	0.008642	17	21	0.553

**SCP= “Single Country Publication”, MCP= “Multiple Country Publications”**



**Figure 4. Corresponding Authors Country**

### 5.8 Authors Keywords of Women's Empowerment Research

Table 6 shows the Keyword analysis selecting the top 20 Keyword Occurrence. The analysis is based on the Web of Science keywords. They are selected and used in the search strategy in an interval of 10 years. The word Empowerment is topped with 563 times of Occurrence. The next keyword in Gender appeared 449 times, Women 275 times, Women's Empowerment 170 times, and Intimate Partner Violence keyword 145 times occurrence respectively. The presumption of this table the word Qualitative is at the lowest level which is supposed to happen 38 times.

**Table 6: Authors Keywords of Women's Empowerment Research**

S. No.	Keyword	Occurrences	Total link strength
1	Empowerment	563	1351
2	Gender	449	1059
3	Women	275	678
4	Women's Empowerment	170	374
5	Intimate Partner Violence	145	332
6	India	122	318
7	Domestic Violence	109	245
8	Agency	71	215
9	Education	69	200
10	Feminism	77	198
11	Hiv	73	198
12	Development	61	170
13	Gender Equality	86	169
14	Mental Health	57	162
15	Microfinance	59	153
16	Qualitative	38	152
17	Power	39	150
18	Sub-Saharan Africa	57	150
19	Women's Health	43	143
20	Africa	51	140

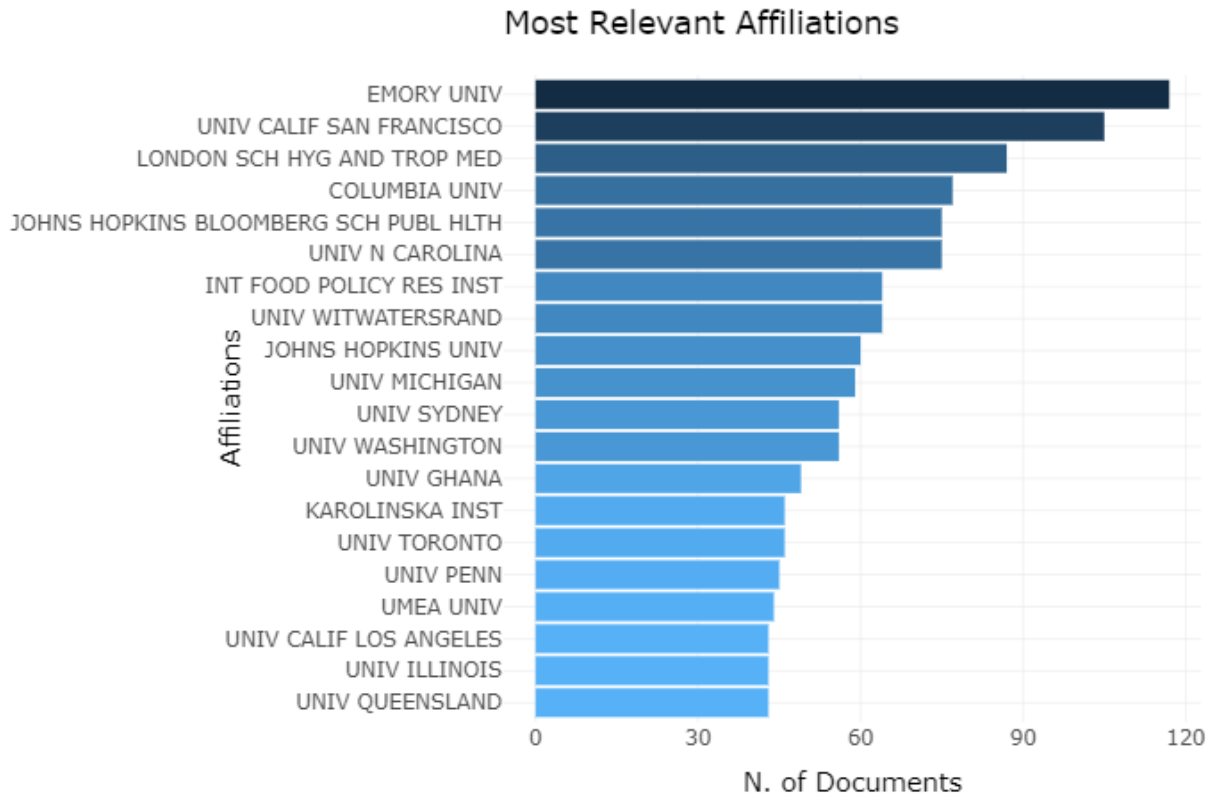
**Figure: 5 Keywords Co-occurrence Density Visualization of Women's Empowerment**

Keyword analysis provides a chance for the key discovery research area (Figure 5). A keyword provides a good picture of the network knowledge domain, covered topics, and how to provide insights these issues are intellectually connected and organized. Therefore, a keyword co-occurrence network was created using VOSviewer 1.6.16.0 Software, based on the bibliographic data retrieved from Web of Science. Figure 5 shows a co-occurring keywords network that includes 11 clusters and 7272 links. The high-frequency keywords identified are Empowerment (frequency = 563), Gender (frequency = 449), Women (Frequency = 275), Women's Empowerment (Frequency = 170), Intimate Partner Violence (Frequency = 145), India (Frequency



<b>S.No.</b>	<b>Affiliations</b>	<b>No. of Documents</b>
1	Emory Univ	117
2	Univ Calif San Francisco	105
3	London Sch Hyg And Trop Med	87
4	Columbia Univ	77
5	Johns Hopkins Bloomberg Sch Publ Hlth	75
6	Univ N Carolina	75
7	Int Food Policy Res Inst	64
8	Univ Witwatersrand	64
9	Johns Hopkins Univ	60
10	Univ Michigan	59
11	Univ Sydney	56
12	Univ Washington	56
13	Univ Ghana	49
14	Karolinska Inst	46
15	Univ Toronto	46
16	Univ Penn	45
17	Umea Univ	44
18	Univ Calif Los Angeles	43
19	Univ Illinois	43
20	Univ Queensland	43





**Figure: 6 Most Relevant Affiliations of Documents**

## 6. Conclusion

On the basis of this analysis, it could be concluded on the results on Women’s Empowerment research output at the world in 2011-2020 for 10 years a total of 4511 publications were published at the Global level. The maximum publication is 763 in 2020. The highest annual ratio of growth was 133.57% in the year 2019. It is also an inference that the majority of 3897 (86.3%) records from Articles have been positioned in the first rank. The highest paper published from USA, United Kingdom, Australia, Canada, India and others during the marked study period. The study also reveals the top authors who have received the maximum article citation published in Women’s Empowerment. The author of Yount KM has received the maximum citations i.e. 307 for his 33 publications. Emory Univ has contributed the highest number of research publications with 117. Finally, it is concluded that the result of a scientometric study that focuses on the field of Women’s Empowerment research output and the collaboration among authors, institutions, and countries at the World Women’s Empowerment research output has been gradually increased year by year.

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