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VISUALIZATION OF WOMAN LEADERSHIP LIBRARY STUDY WITH BIBLIOMETRIC REVIEW (1952 – 2020)

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VISUALIZATION OF WOMAN LEADERSHIP LIBRARY STUDY WITH BIBLIOMETRIC REVIEW (1952 – 2020)

BY

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Abstract

Research on Woman Leadership continues to grow but is limited to one country and/or one field. From a bibliometric point of view, this study aims to visually study mapping and research trends in the field of Woman Leadership on an international scale. This study uses bibliometric techniques with secondary data from Scopus. Analyse and visualize data using the VOSViewer program and the search result analysis function in Scopus. The study analysed 767 scientific documents published from 1957 to 2020. According to the study, The George Washington University and Longman, K.A., has the most active institutions and individual scientists in Women Leadership research. Social Sciences is the most controlled and widely disseminated field of Woman Leadership. There are five categories of collaborative maps of researchers from around the world. Based on the identification of accumulated knowledge from more than sixty-eight years of publication, this study proposes grouping the themes of Woman Leadership: Leadership, Human, Education, Economic, and Female, abbreviated as LHEEF theme.

Keywords: *Woman Leadership, Female, Education, Bibliometric, VOSViewer*

Introduction

Gender equality has been reflected in the World Humanitarian Day which is commemorated on August 19 (Patel et al., 2020). Of course, this is one of the drivers of the many researches on equality in leadership (Samo et al., 2019). Because most of the existing ones, all organizations and companies are always led by a man (Samo et al., 2019). Women are only underestimated with the idea that women are only in charge of taking care of children, and taking care of the household without having to pursue a career (Eagly & Carli, 2018). Women are seen as having less ownership of the right to lead something (Vial et al., 2016). Now the role of gender dynamics, especially for women, is very important and deserves to be analysed more critically and practically (Allen et al., 2019). In developed countries, women's leadership has been considered in the context of boardroom, banking, finance, and business (Barrios et al., 2020).

Leadership itself is a catalyst that provides direction for many important functions in an organization (Girma, 2016), (Zagoršek et al., 2009). An increase in the number of women in male-dominated fields will eventually lead to an increase in the number of female leaders (Alwazzan & Al-Angari, 2020). Female leaders tend to focus on the softer side of leadership (Eagly et al., 2003). Women's leadership behaviour tends to be loving (accepting and sensitive to feelings), supportive (focusing on balanced professional and personal relationships) and leaning towards transformational leadership (Eagly, 2005), (Hoyt et al., 2009). According to the study, female leaders play a role in reducing gender inequality at lower organizational levels, giving voice and power to other women and acting as agents of change across organizational hierarchies (Phipps & Prieto, 2020). The aim is to eliminate gender organization altogether as gender inequality has a devastating impact on individual victims, as well as organizations and society (Krishnan & Park, 2005), (Manner, 2010). Sometimes, women leaders face a dilemma in choosing between what they think is appropriate and what others think is appropriate (Nelson & Levesque, 2007). Therefore, it is important for business and government to build a solid understanding of the challenges and leadership styles of women (Paustian-Underdahl et al., 2014).

Women's leadership as a research topic has been studied extensively over the last few decades and therefore there is a large amount of leadership literature (Abadi et al., 2020). In general, previous research related to Women's Leadership was limited to examining only one research topic, such as one country (Hou & Wu, 2020) and one field (Prager, 2020). There are not many reports on Woman Leadership here, although an extensive picture map is visualized over the years with data from several studies published on a global scale. There are no publications that directly address the strong positive relationship between relationships, scholars, and the influence of Woman Leadership. One of the methods used to view research in general is the bibliometric method. Bibliometrics is a method for measuring and analysing scientific references with a combination of mathematical and statistical methods. Bibliometrics is a statistical technique for analysing bibliometric publication data such as peer-reviewed journal articles, reports, reviews, books, magazines, conference proceedings, and related publications. Bibliometric methods have been widely used to present the relationship between quantitative methods and research domains (Global, 2021). This study poses a research question, how is the mapping and research trend of Woman Leadership using visual bibliometric analysis? From a bibliometric point of view, this study aims to visually study mapping and research trends in the field of Woman Leadership on an international scale.

This scientific article is organized into several sections. The first part of the introduction discusses the background, questions, and objectives of the research. The second part of the method describes the scientific approach used in the research. The third section of the results and discussion describes the research findings and the fourth section summarizes the essence of the research.

Research Method

This study uses bibliometric analysis in a comprehensive literature database. This survey has identified relevant keywords related to the Woman Leadership Study to search and identify related articles in the Scopus global database. Researchers have used the Scopus database as the main source of information because it is considered a reliable source of scientific publications by academics. This study uses the keyword "Woman Leadership" in the keywords title, abstract, and author to obtain the required data from the Scopus database. Mining the data using the following search query options TITLE-ABS-KEY ("woman Leadership") AND PUBYEAR < 2021. In this step, we have found 767 publications over the last 68 years from 1957 to 2020. In the current study, the metadata of Scopus results extracted in CSV dataset format. The Scopus website provides a search result analysis function that displays bibliometric information from selected publications. We have used this service to analyse and visualize the publication productivity of researchers, institutions and countries. In addition, this feature measures the number of annual publications and publication citations, as well as the proportion of subject areas and source documents (A Purnomo et al., 2021).

In the next stage, the researcher analysed the collected documents using VOSviewer for incident analysis and co-authoring. This study has applied co-authorship analysis with the author's unit of analysis and a complete computational systematics technique using VOSViewer to derive an international collaborative research network of researchers. This study performs an in-depth co-event analysis with keyword relationship analysis as well as a fully systematic computational

technique using VOSViewer to generate a network of keyword maps for the research theme (Agung Purnomo et al., 2020). Statistics and simple tables have been calculated and tabulated using Microsoft Excel. Then the research results are synthesized and triangulated.

Result and Discussion

This section describes the resulting data developed by the most common organizational affiliations, countries, individual studies, the greatest frequency of fields of study, annual source documents, annual documents and cited papers, map publications, and the Woman Leadership authorship network.

A. Document based on Higher Education Affiliation of Woman Leadership Study

The most prolific research affiliate in the Study of Woman Leadership is The George Washington University, USA (n = 11). Then followed by Texas A&M University, United States (n = 10), Azusa Pacific University, United States (n = 10), Case Western Reserve University, United States (n = 7), Simmons University, United States (n = 7), University of Minnesota Twin Cities, United States (n = 7), University of Wisconsin-Madison, United States (n = 7), Emory University, United States (n = 6), City University of New York, United States (n = 6), North-western University, United States (n = 6), as shown in Figure 1.

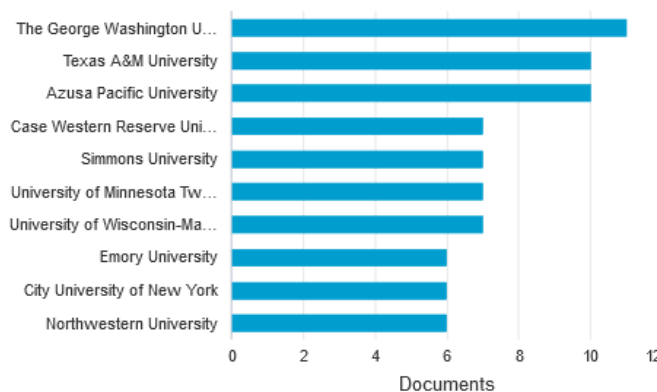


Figure 1: Document Number by College Affiliation of Woman Leadership Study

From the data above, it can be seen that the most productive research affiliations in the Woman Leadership Study are mostly from the United States. This is because the United States is one of the countries that strongly supports research and development, including in the field of Woman Leadership.

B. Document based on the Author of the Woman Leadership Study

Information In Figure 2 it can be explained that the author with the most publications in the field of Woman Leadership Studies is Longman, K.A. (n = 10) Followed by Stead, V. (n = 7), Bilimoria, D. (n = 6), Debebe, G. (n = 6), Elliott, C. (n = 6), Czabanowska, K. (n = 4), Fritz, C. (n = 4), Jean-Marie, G. (n = 4), Kalaitzi, S. (n = 4), and Madsen, SR (n = 4).

Longman, K.A. as the author with the largest publication in the field of Woman Leadership from Azusa Pacific University, Azusa, CA, United States who is also included in the top most productive research affiliates in the Study of Woman Leadership

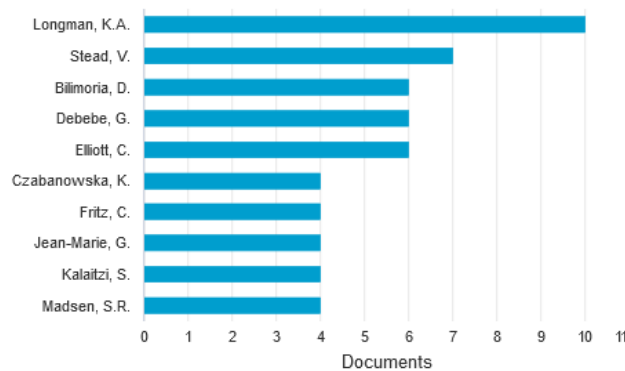


Figure 2: Document Number by Author of Woman Leadership Study

C. Country-based document from the Study of Woman Leadership

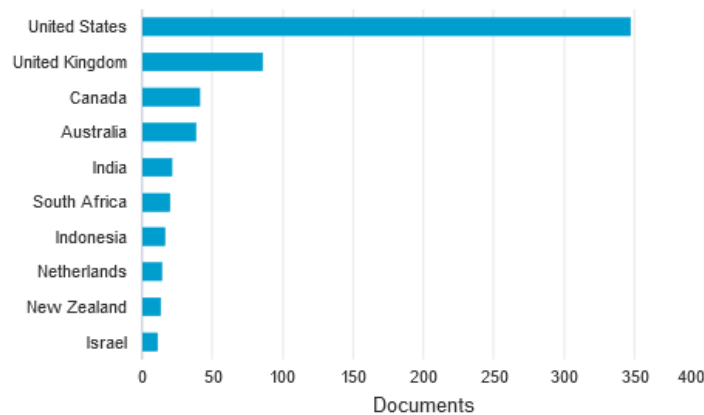


Figure 3: Number of Documents by Country from the Woman Leadership Study

From Figure 3 it can be explained that the countries that made the largest contribution to the publication of the Woman Leadership Study were the United States (n = 347), then the United Kingdom (n = 86), Canada (n = 41), Australia (n = 38), India (n = 21), South Africa (n = 20), Indonesia (n = 16), Netherlands (n = 14), New Zealand (n = 13), and Israel (n = 11). Impact of Information Technology on Work Effectiveness

D. Documents by Subject Area of the Study of Woman Leadership

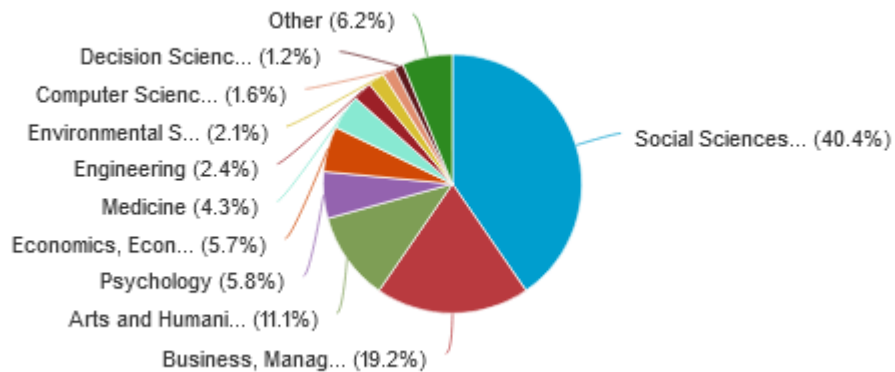


Figure 4: Number of Documents Based on Subject Areas of the Woman Leadership Study

The field of study of international academic publications with the most women leadership studies is Social Sciences (n = 485 or 40.4 percent), then Business, Management and Accounting (n = 231 to 19.2 percent), Arts and Humanities (n = 133 or 11.1 percent). Psychology with (n = 70 or 5.8 percent), Economics, Econometrics and Finance with (n = 68 or 5.7 percent), Medicine with (n = 52 or 4.3 percent), Engineering with (n = 29 or 2.4 percent), Environmental Science with (n = 25 or 2.1 percent), Computer Science with (n = 19 or 1.6 percent), Decision Sciences with (n = 14 or 1.2 percent).

E. Documents per year based on sources from the Woman Leadership Study

Table 1: Number Sources of the Creative Performance Research

Scientific Source	SJR	Articles
National Science Foundation	0.15	13
National Institutes of Health	0	10
U.S. Department of Health and Human Services	7.99	10
Economic and Social Research Council	0	5
UK Research and Innovation	0	4

160 publication sources have published research on Woman Leadership. The top number of articles per year by source in digital economy research is the “National Science Foundation” (n = 13). Scimago Journal Ranking (SJR) ranks journals according to average prestige per article, and journal subject areas, quality, and reputation based on citation scores. The most productive journals that publish research on Woman Leadership have a moderate SJR indicator, 0.53 – 15.99.

F. Annual document of the Woman Leadership Study

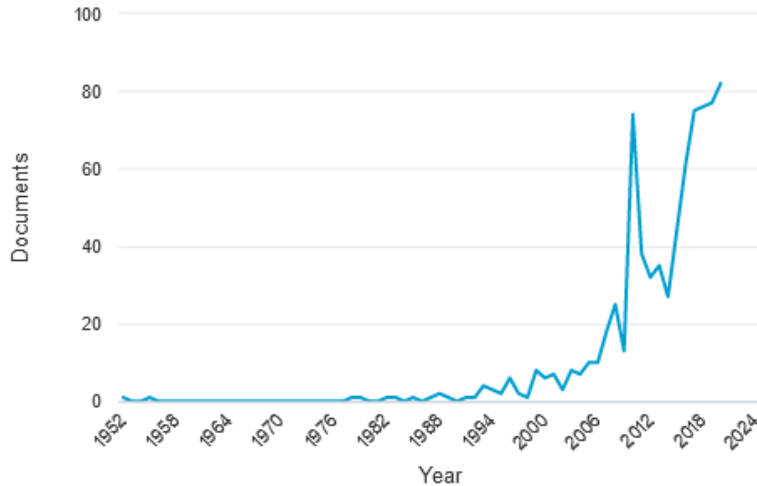


Figure 5: Number of Documents Per Year from the Woman Leadership Study

The number of annual international publications on the study of Woman Leadership tends to show an upward trend in the past year. With 767 journals, Figure 6 shows the highest publication peak in 2020. Since 1952, researchers have been researching Woman Leadership. The Woman Leadership study had 77 articles in 2019, 76 articles in 2018, 75 articles in 2017, 61 articles in 2016, and 44 articles in 2015.

G. Document excerpted from Study Woman Leadership

Table 2: Documents quoted from the field of Woman Leadership Studies

Document Title	Authors	Year	Source	Cited by
Women as policy makers: Evidence from a randomized policy experiment in India	Chattopadhyay, R., Duflo, E.	2004	Econometrica 72(5), pp. 1409-1443	716
Clearing the air: Identity safety moderates the effects of stereotype threat on women's leadership aspirations	Davies, P.G., Steele, C.M., Spencer, S.J.	2005	Journal of Personality and Social Psychology 88(2), pp. 276-287	354
Taking gender into account: Theory and design for women's leadership development programs	Ely, R.J., Ibarra, H., Kolb, D.M.	2011	Academy of Management Learning and Education 10(3), pp. 474-493	3323

The most cited international publication in the field of Woman Leadership Studies as a form of academic impact is the work of Chattopadhyay, R., Duflo, E. in 2004 entitled "Women as policy makers: Evidence from a randomized policy experiment in India" with 716 citation articles. Chattopadhyay, R. is from the Business Environment Group, Indian Inst. of Management,

Calcutta, Diamond Harbor Road Joka, Kolkata - 700104 West Bengal, India. Meanwhile, Duflo, E. is from the Dept. of Economics, Massachusetts Inst. of Technology, 50 Memorial Drive, Cambridge, MA 02142, United States (Duflo & Chattopadhyay, 2016).

H. Study Theme Map

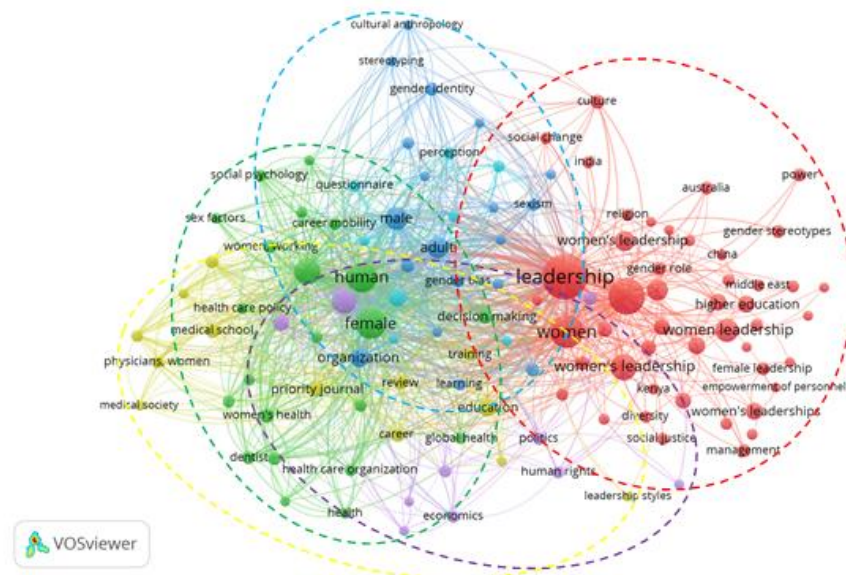


Figure 6: Study Theme Map

The VOSviewer software was used to evaluate and visualize keyword schema construction for Woman Leadership from the research theme map. The repetition limit is a requirement for the minimum number of papers related to the keyword. As a result, 119 keywords out of 2,303 met the criteria. Figure 8 represents six groups of research themes for international academic publications on Woman Leadership, which have been simplified and shortened to LHEEF themes based on research keywords.

- 1) Leadership Cluster (Red). Contains themes with keywords such as culture, diversity, management, higher education, social justice, and others.
- 2) Human Cluster (Blue). Related to keywords such as male, adult, gender identity, and others.
- 3) Education Cluster (Yellow). Related to keywords such as training, career, medical school, priority journal, medical society, and others.
- 4) Economic Cluster (Purple). This cluster is mostly related to the keywords Politics, human rights, and others related to politics.
- 5) Female Cluster (Green). Most of them are filled with the keyword's women, working, women's health, social psychology, career mobility, and others that have to do with women.

I. Author Collaboration Network



Figure 7: Author Collaboration Network

Longman, K.A. in the blue cluster from Azusa Pacific University, Azusa, CA, United States (Longman et al., 2019). While in the green cluster there are Stead V., and Elliott C., they have written a joint publication with the research title "Pedagogies of power: Media artefacts as public pedagogy for women's leadership development" in 2019 (Stead & Elliott, 2019). The last one in the red cluster is Debebe, G who comes from George Washington University, Washington, DC, United States and Bilimoria, D. who comes from Case Western Reserve University, Cleveland, OH, United States. The two wrote together in 2019 (Patel et al., 2020).

Conclusion

Based on the research results, the number of international publications on the study of Woman Leadership tends to show an upward trend in the past year. The United States is the country that makes the largest contribution to the publication of Women Leadership research, with 347 articles. With 13 papers published in the National Science Foundation journal, The George Washington University is the most engaged research institution. Longman, K.A., is the most published individual academic researcher in the journal Woman Leadership, with ten articles. Social Sciences is the most intensively studied field in Woman Leadership publications, with 485 documents (40.4%). In 2020, the largest number of academic publications in the field of Women Leadership research. The publications of Chattopadhyay, R., Duflo, E. received the most citations in the 2004 journal "Women as policy makers: Evidence from a randomized policy experiment in India". Publishing Woman Leadership is linked to three collaborative research groups. This study proposes a convergence axis classification, which includes publications in Woman Leadership, to categorize the body of knowledge generated over sixty-eight years of academic publication in terms of knowledge contribution: Leadership, Human, Education, Economic, and Female, abbreviated as LHEEF themes. As a practical result of the identification of key themes in the field of Woman Leadership, practical studies are needed to clarify the background and general subjects, as well as study gaps, there is a clearer understanding of their needs. All of this will lead to new research on the lack of expertise and further analysis of this discipline. Woman Leadership's potential to contribute to career journey and success is a frequently studied theme.

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