

A Bibliometric Analysis of Disaster Management in Libraries: Focusing Google Scholar Articles Published from 2018 to 2022

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ABSTRACT

Any incident that threatens the library's resources, collection, equipment, systems, or people is considered a disaster. According to the International Federation of Library Associations (IFLA), disaster management can be used to successfully manage risks by reducing their influence. The main objective of this study was to identify the natural, man-made and hybrid disasters that the libraries experienced globally from 2018 to 2022. Other objectives were to analyze the content of the papers using the most relevant keywords, to examine the yearly distribution of papers; to study the pattern of authorship of the documents; to study the number of citations received by the published papers; and to examine which countries produced the largest number publications on disaster management in libraries. The search was conducted using articles published in the 2018–2022 period. The research data was obtained *Publish or Perish software* program through the Google Scholar database and Google Scholar advanced search tool. 985 articles were found of which 129 library-related disaster incidents and a review of library-related disaster literature were selected for data analysis. The keywords were used to select the most related articles anywhere in the article. VOSviewer software and Excel package was used to analyze and visualize data in the study. The results show that the most prevalent type of disasters faced by libraries were natural disasters. Floods 75 (24%), fire 57 (17%), earthquakes 42 (13%), hurricane 28 (9%), water through leaking 18 (6%), storms 11 (3%), infestations of mold or pests 11 (3%), tsunami 10 (3%), severe weather conditions 10 (3%), cyclones 10 (3%), tornado 8 (2%), volcano 8 (3%), thunder 8 (2%) and others 32 (10%).

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The most relevant term was library. Natural disasters occurred at a maximum rate during the last five years. The study recommends a scientific approach to disaster management in libraries utilizing relevant datasets and bibliometric tools.

Keywords: Bibliometric Analysis, Library Disasters, Disaster Management, Natural Disasters, Google Scholar, VOSviewer.

Introduction

Disaster management and preparedness are essential for all types of libraries. According to the literature, natural disasters, man-made disasters and hybrid disasters can occur at any library at any moment without warning and cause intolerable consequences. Therefore, libraries should pay attention to the disasters in order to minimize the damage of the library. Natural disasters include phenomena such as floods (Rasaki, 2019; Dharmasiri, 2014), hurricanes (Akussah & Fosu, 2001; Alegbeleye, 1993), tsunamis (Amarasiri, 2005), animal attacks (Disaster Management Centre, 2015) and fire (Rasaki, 2019; Nwokedi et al., 2017). The other category is disasters caused by humans (Morgan & Smith, 2014), (Rasaki, 2019), (Akussah & Fosu, 2001; Alegbeleye, 1993) and (Bansal, 2015). A bibliometric analysis of disaster management in libraries is important research which evaluates the impact of scholarly literature and networks of authors and journals in a specific field. Bibliometric analysis is a popular and rigorous method for exploring and analyzing large volumes of scientific data (Nandiyanto, 2022). Google Scholar (<http://scholar.google.com/>) is a database created by Google Inc. to provide access to global scholarly literature. One of the largest scientific bibliographic databases provided free of charge (Aguillo, 2011). Hence very important to identify published trends on disaster management in libraries, so that this study used the Google Scholar database.

The study only used the keywords listed below to search for information; “Disaster Management in libraries”, “Natural disasters”, “Man-made disasters”, “Hybrid disasters”, and “Disaster Preparedness”. Digital disasters were not considered in the study. All sources were in English. There were no sources based on scientific evidence on bibliometric analysis of disaster management in libraries found on Google Scholar study. Hence, the study examined Google Scholar literature sources and offers prospective directions for future scientific work on disaster management in libraries.

As a result, scientific evidence-based study will be crucial in closing a gap in the literature surveys.

Objectives

Main Objective

- To identify the natural, man-made and hybrid disasters that the libraries experienced globally, between from 2018 to 2022

Other Objectives are to

- Study the pattern of authorship of the documents
- Analyse the content of the papers using the most relevant terms
- Examine the yearly distribution of papers
- Study the number of citations received by the published papers
- Examine which countries produce the largest number of publications on disaster management in libraries

Methodology

The bibliometric methodology encompasses the use of quantitative techniques (i.e., bibliometric analysis - e.g., citation analysis) on bibliometric data (e.g., units of publication and citation). The Bibliometric analysis method is used in this study. The research data was obtained *Publish or Perish software* program through the Google Scholar database and Google Scholar advanced search tool. The keywords “Disaster Management in libraries”, “Natural disasters”, “Man-made disasters”, “Hybrid disasters”, and “Disaster Preparedness” were used in the data filtering procedure anywhere in the article. The search was conducted for articles published in the 2018–2022 range. From the search, the total of 985 articles were of which 129 library-related disaster incidents and a review of library-related disaster literature were selected for data analysis. VOSviewer and Excel packages were used to analyze and visualize data in the study. The results are presented in tables, graphs, and figures.

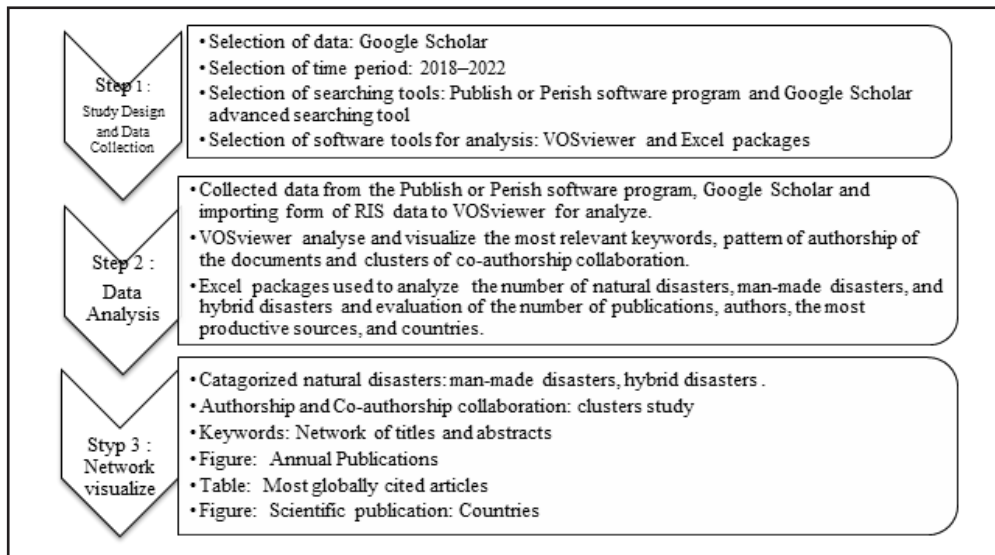


Figure 1 : The steps of Bibliometric analysis

Results and Discussion

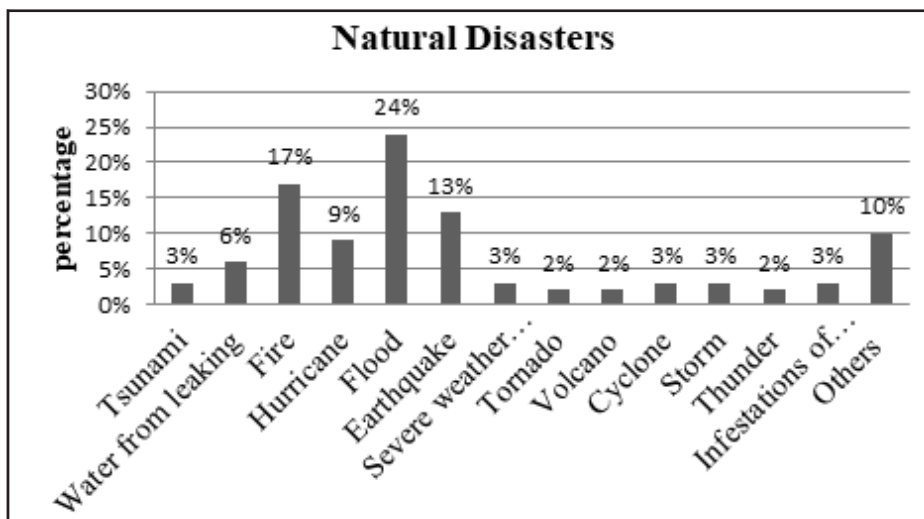


Figure 2 :Natural Disasters

Figure 2 illustrates the natural disasters that libraries experienced globally from 2018 to 2022. Flood disasters had the highest value of 75 (24%). The fire disaster had the second highest value of 57 (17%). The earthquake disaster had

the third highest value of 42 (13%). Others 32 (10%), hurricanes 28 (9%), water from leaking 18 (6%), storms 11 (3%), and infestations of mold or pests 11 (3%). Also tsunamis, severe weather conditions, and cyclones, were 10 (3%). Similarly, 8 (2%) libraries experienced tornado, volcano, and thunder disasters globally.

According to the results of man-made disasters, the highest value of 17 (21%) was vandalism and theft of library materials. warfare 16 (19%), terrorist attacks 15 (18%), library building disasters 10 (12%) and others 7 (9%). Hybrid disasters such as COVID-19 13 (87%) and transportation wreck 2 (13%).

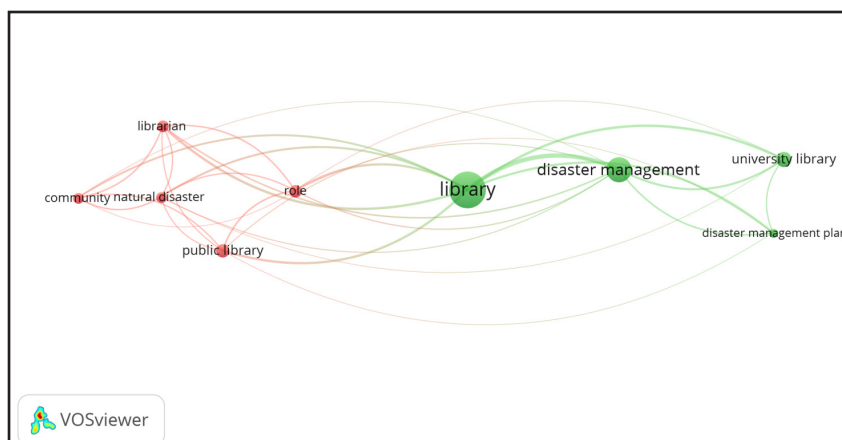


Figure 3 : Network visualization of titles and abstract terms

Figure 3 shows the relationship between the title and abstract terms described in a network and the grouping of each term associated with disaster management in libraries. Accordingly each cluster has one main term, namely cluster 1 term was librarian in red. The librarian term link with 6 terms. In general, the term librarian is connected to the terms community, natural disaster, public library and role. The cluster 2 term was library in green links with 30 terms. In general, the term library is connected to the terms disaster management, disaster management plan and university library. According to the network visualization results, the term library was the most prominent.

According to the results of the single-authored documents were 47 and the co-authored document were 82. The most relevant terms were library, disaster management and librarian. In the annual publication, there were 22 articles published in 2018, 21 in 2019, 25 in 2020, 33 in 2021, and 28 in 2022. The authors of M. Kosciejew (2021), Ilo, Promise Ifeoma; Izuagbe, Roland;

Mole, Austin JC; Ekwueme, Loveth (2018) and J. Feather (2018) had the most globally cited articles in the field of disaster management in libraries. The USA, Nigeria and India were the countries mostly producing scholarly literature, with 32 (25%), 30 (23%) and 22 (17%) publications.

Conclusion

The natural disasters have occurred at a maximum rate during the last five years. Over the past five years, the libraries has increasingly experienced natural, man-made, and hybrid disasters. Authorship collaboration was very high for five years. The most relevant term was library. Publications on disaster management in libraries and have gradually increased during the period 2018 – 2022. “The Coronavirus pandemic, libraries, and information: a thematic analysis of initial international responses to COVID-19,” written by M. Koscieljew in 2021, was one of the most globally cited article in the field of Disaster Management in libraries. The USA was at the uppermost place in the category of scholarly literature, with 32 (25%) publications. The study suggests that it could be carried out as a scientific study by using more pertinent datasets and utilizing additional bibliometric tools and programs.

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