

# Libraries as Catalysts for Health Sector Development: Insights from a Systematic Review

Jelly A. Okomo

Directorate of Library Services, The University of Dodoma

Email: [ayungojelly@gmail.com](mailto:ayungojelly@gmail.com)

## Abstract

*Libraries are valuable sources of health information required for diagnosis, treatment and prevention of diseases. Numerous studies have shown that libraries enhance access to and dissemination of health information, which is crucial for health sector development. Despite the importance and rapid growth of research in the field, researchers have made few attempts to systematically review and incorporate findings from previous studies on the role of libraries in health sector development. The main purpose of this study was to provide a better understanding and a detailed review of the current state of research on the contribution of libraries in health sector development. A systematic review was conducted using the PRISMA 2020 Methodological Framework. In this systematic review, data on the role of libraries in health sector development were collected, analyzed and synthesized from journal articles published in digital databases between 2014 and 2024 using prescribed procedures. The research field, publication dates, journal language and methodological characteristics were included in the analysis. The findings indicate that libraries contribute to health sector development through the dissemination of health information required for the prevention and management of diseases, health professionals' development, promotion of health science research and community outreach programmes. Overall, the review indicated that several studies have been conducted on the role of libraries in healthcare settings, with most of them focusing on educational health institutions. Although these studies are relevant to the development of the health sector, more high-quality research is needed to focus on economic development aspect of the health sector.*

**Keywords:** *Libraries, Library services, Health services, Health sector, Development, Medical libraries, Health institutions*

## Introduction

Within the health sector, the Sustainable Development Goals (SDGs) aspire to guarantee healthy lives and well-being for all people by 2030 (WHO, 2024). The global target is to attain the quality of life for all people in all aspects of life by 2030. The SDGs thus, aim to improve the quality of life for all through initiatives focused on poverty reduction, ensuring food security, providing access to quality education, delivering comprehensive health services and fostering development

in other sectors (Morton *et al.*, 2017). It is believed that progress in the health sector will help countries attain other sustainable development goals (WHO, 2024). This implies that development in the health sector is a catalyst to overall national development.

Attaining SDG 3 necessitates the accessibility of reliable health information for both healthcare providers and the general community. Evidence from recent studies indicates that health information accessibility has substantial contributions to health sector development (Ayungo, 2024; Manyazewal, 2017). Studies (see for instance, Manyazewal, 2017) have also shown that health information is essential for strengthening health systems. Additionally, Wude *et al* (2020) found that routine utilization of health information by health workers improves health services and foster overall development within health sector.

Researchers have reported that libraries and information centers provide high-quality health information for health workers and the general community. For example, Okafor *et al* (2023) and Wude *et al* (2020) have reported that libraries play an important role in strengthening the health sector through provision of more reliable health information. Likewise, Jan *et al* (2021) reported that medical libraries contribute to the development of health sector by supporting clinical decision making. The findings from the aforementioned studies indicate that the contribution of libraries to the health sector is essential. This support is crucial for the sector to effectively achieve the Sustainable Development Goals (SDGs) by the year 2030.

Despite the extensive body of research demonstrating that libraries play a vital role in providing and distributing health information essential for the advancement of the health sector, there has been a notable lack of systematic reviews by researchers to synthesize and integrate insights from earlier studies regarding the contributions of libraries to health sector development. Consequently, the present study sought to provide a better understanding and a detailed review of the current state of research on the contribution of libraries to health sector development by addressing the following questions:

- a) What is the role of libraries in providing access to health information and resources?
- b) What is the impact of library services on healthcare education and training?
- c) How effective are library outreach programs in promoting public health?

- d) How do libraries collaborate with healthcare institutions in enhancing health sector services?

## **Methods**

### **Study design**

A systematic review was conducted following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Framework (Khan *et al.*, 2003). The study followed five steps, namely formulation of research questions for review, identification of relevant literature, assessing the quality of studies and selection of relevant literature, summarizing the evidence and interpretation of the results.

### **Identification of relevant literature**

The literature reviewed in this study was identified through searching across various online databases. The following online databases were used: Web of Science, PubMed, Semantic Scholar and Research4Life. The search terms used were “health libraries”, “medical libraries”, development, “health sector” and “library roles”. Boolean operators AND, OR and NOT, alternative spelling, synonyms and narrower terms were applied during the search.

All publications identified through database search were subjected to inclusion criteria. A researcher and independent librarian searched through the databases using stipulated key terms and techniques. Two sets of publications retrieved through databases searched by the researcher and independent librarian were compared. Duplicate publications and those that did not meet inclusion criteria were omitted. Finally, 14 publications that were obtained through database search were included in the analysis.

### **Eligibility criteria**

The study included original qualitative and quantitative publications that met the following criteria: time frame (studies published from 2014 to 2024), original publications (literature that reported primary data) and literature published in the English language.

### **Exclusion criteria**

The following criteria were used to exclude publications from the study: time (studies published before 2014), studies published in a language other than English, publications in which full text were inaccessible, and studies that did not

report primary data such as systematic reviews and meta-analysis. The study also excluded non-original publications such as opinion pieces, review articles, commentaries, editorials and theoretical papers.

### **Data extraction and analysis**

Data was extracted from all publications included in this systematic review. Extracted data was recorded in an Excel spreadsheet under the following headlines: title and author, date of publication, language of publication, objectives of the study, originality of the study, study findings and conclusion.

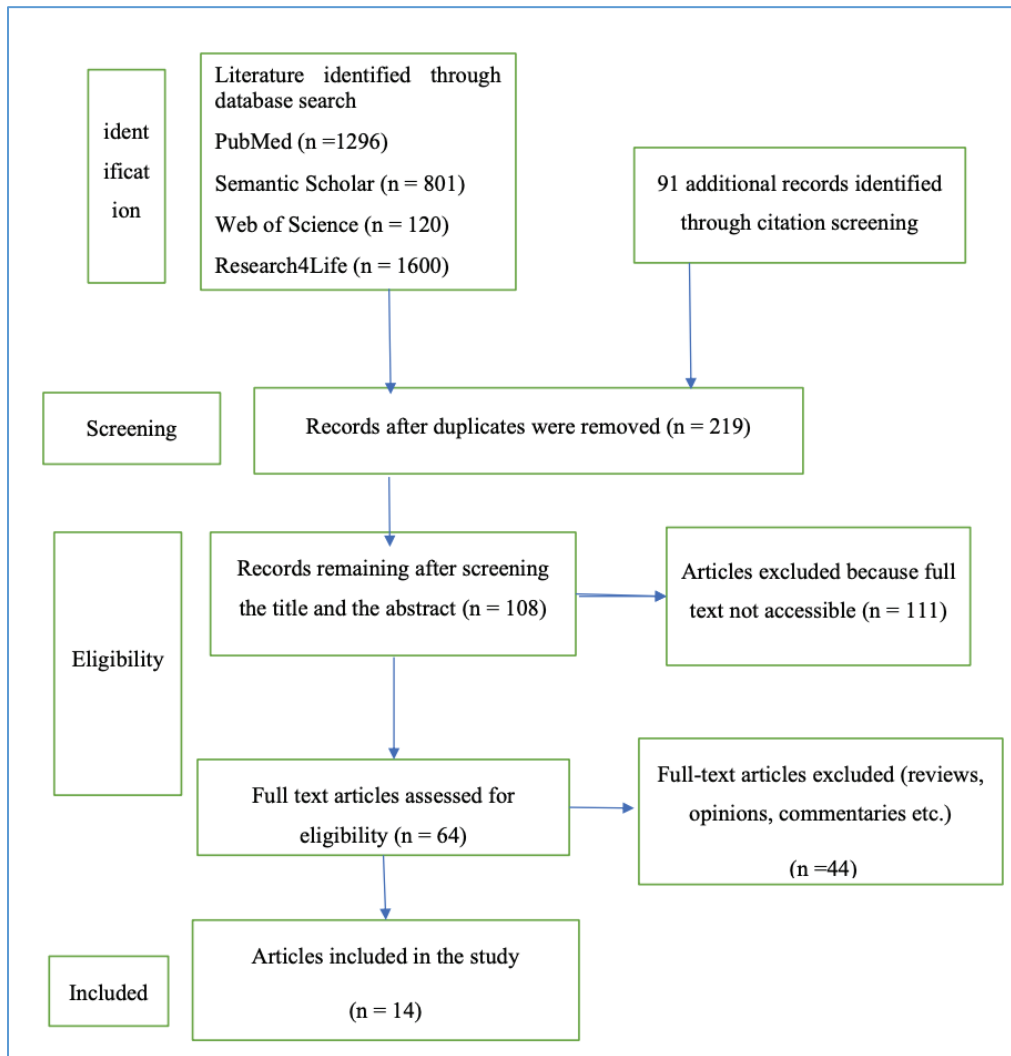
Data extracted from the reviewed publications were analyzed to identify the roles of libraries in providing access to health information and resources, impact of library services on healthcare education and training, effectiveness of library outreach programs in promoting public health and collaboration of libraries and healthcare institutions in enhancing health sector services.

### **Quality Assessment**

To ensure the validity and reliability of the study, the quality of the selected studies was assessed using the Mixed Method Appraisal Tool (MMAT) as recommended by Archibald *et al* (2021).

### **Results**

Figure 1 illustrates the flow of information through each phase of systematic review. Overall, 3817 publications were obtained through database search, and 91 publications were obtained through citation screening, making a total of 3908 records retrieved. After removing the duplications and screening for eligibility criteria, 14 publications met the inclusion criteria and were included in the analysis. Data were analyzed using thematic analysis and narrative approach as postulated by Popay *et al* (1998) and Popay *et al* (2016). Results are presented following research questions:



**Figure 1:** PRISMA Flow Diagram for Systematic Review

### Role of libraries in providing access to health information and resources

Seven studies reported on the role of libraries in providing access to health information and resources (Bloss *et al.*, 2022; Ekere *et al.*, 2019; Jameson & Duhon, 2022; Knapp *et al.*, 2023; Okafor *et al.*, 2023; Swanberg *et al.*, 2022; Walker, 2021). The findings from the reviewed studies show that libraries play an important role in the provision of accurate and reliable health information to healthcare providers, educators, students and the general community. For example, Bloss *et al.* (2022), Ekere *et al.* (2019) and Knapp *et al.* (2023) concur that

health libraries provide patrons with their desired health information resources which enable them to access health information they need for healthy decision making. Bloss *et al* (2022), Jameson and Duhon (2022), and Swanberg *et al* (2022) further hold that libraries promote health information literacy which enables individuals to access and use the most reliable health information resources.

### **Impacts of library services on healthcare research, education and training**

Ten studies reported on the impacts of library services on healthcare research, education and training (Alpi, 2024; Bloss *et al.*, 2022; Charbonneau & Vardell, 2022; Ekere *et al.*, 2019; Jameson & Duhon, 2022; Kelham, 2014; Knuttel *et al.*, 2020; Lenstra & Flaherty, 2020; Swanberg *et al.*, 2022; Walker, 2021; Zager *et al.*, 2016). Through the reviewed publications it was found that libraries and librarians contribute to health sector development by supporting healthcare research and facilitating education and training for healthcare providers as well as the public. Findings from other studies such as Bloss *et al* (2022), Charbonneau and Vardell (2022), Kelham (2014), Knuttel *et al* (2020) and Zager *et al* (2016) also confirm that libraries and health science librarians enhance health sector development through the provision of educational resources and training to the health workers and the community at large. Furthermore, based on the surveyed literature libraries support teaching and learning in health institutions through the provision of multimedia resources and creation of conducive environment for learning (Bloss *et al.*, 2022; Ekere *et al.*, 2019; Knapp *et al.*, 2023). In addition, it was found that libraries provide healthcare research support to medical students and researchers through the provision of reference management tools, guidance in literature reviews and provision of access to research databases (Alpi, 2024; Charbonneau & Vardell., 2022; Ekere *et al.*, 2019; Jameson & Duhon, 2022; Knuttel *et al.*, 2020; Walker, 2021).

### **Effectiveness of library outreach programs in promoting public health**

Analysis of the literature included in the study also reported about the effectiveness of library outreach programs in promoting public health. Studies revealed that library outreach programs promote public health through the provision of reliable health information resources to the community during outreach services (Alpi *et al.*, 2024; Bloss *et al.*, 2022; Jameson & Duhon, 2022; Kelham, 2014; Knapp *et al.*, 2023; Lenstra & Flaherty, 2020). Library outreach programs also promote public health by enhancing health literacy which is done through the provision of health information resources and workshops (Bloss *et al.*, 2022; Ekere *et al.*, 2019; Jameson & Duhon, 2022; Lenstra & Flaherty, 2020;

Swanberg *et al.*, 2022; Zager *et al.*, 2016). Lastly, the reviewed studies revealed that libraries promote public health through community engagement. Through working with local organizations and communities, libraries enable community members to access health information services easily (Knapp *et al.*, 2023; Jameson & Duhon, 2022; Kelham, 2014; Swanberg *et al.*, 2022; Zager *et al.*, 2016).

### **Collaboration of libraries with healthcare institutions to enhance health sector services**

Analysis of the reviewed publications also revealed that libraries enhance health sector services through collaboration with healthcare institutions. Results from analysis of the publications included in the study show that libraries collaborate with healthcare institutions to improve the quality of healthcare services in different ways. For instance, libraries have been collaborating with healthcare institutions in enhancing health research through research data management, systematic reviews and meta-analyses and publication processes (Alpi *et al.*, 2024; Charbonneau & Vardell., 2022; Ekere *et al.*, 2019; Jameson & Duhon, 2022; Knuttel *et al.*, 2020; Lenstra & Flaherty, 2020; Walker, 2021). In collaboration with health departments, libraries enhance community health initiatives such as mental health support, health screening, vaccination drives and health education (Ekere *et al.*, 2019; Knapp *et al.*, 2023; Lenstra & Flaherty, 2020; Swanberg *et al.*, 2022; Zager *et al.*, 2016). Collaboration of libraries with health institutions supports clinical decisions as libraries facilitate the accessibility of up-to-date research, clinical guidelines and health-related databases such as PubMed and CINAHL (Ekere *et al.*, 2019; Jameson & Duhon, 2022; Knuttel *et al.*, 2020; Walker, 2021).

### **Discussion and Conclusion**

This study based on an intensive literature review, to seek an understanding of the role of libraries in health sector development. After a thorough systematic process, 14 publications that focused on the contributions of libraries to health sector development were selected. Data analysis from the selected and reviewed studies provided a clear and comprehensive description of the library's contributions to health sector development. Generally, the findings of the study signify that libraries support healthcare research, education and training and promote public health.

Results obtained from analysis of the reviewed publications indicate that studies have been organized based on specific themes. The themes identified include the role of libraries in providing access to health information and resources, a

collaboration of libraries with healthcare institutions, effectiveness of library outreach programs in promoting public health and the impact of library services on healthcare research, education and training. Furthermore, the results indicate that most of the primary literature reviewed focused on specific themes, with only a few studies which focused on multiple themes. Notably, the analysis indicates that most studies focused on the impact of library services on healthcare research, education and training.

This study has highlighted the role of libraries in facilitating the development of the health sector as reported by various reviewed studies. Nonetheless, it has several limitations which create a loop for further research. First, the literature search of this systematic review involved studies published between 2014 and 2024. However, research on medical librarianship and the relationship of library and healthcare services have been carried out for decades. Thus, further research should consider literature published before 2014. This will shed more light on the role of libraries in health sector development. Second, although this study comprehensively and intensively examined the contributions of libraries to health sector development, it did not focus on barriers and challenges encountered by libraries and librarians in fostering health sector development. Thus, further research should address barriers and challenges of libraries in promoting health sector development. Last, this systematic review focused on health sector development alone. However, libraries and librarians have significant contributions to the development of almost all sectors. Therefore, further research is important to shed more light on the developmental roles of libraries in various sectors. Importantly however, results of this review provide researchers, librarians and health practitioners with the point of view on the current contributions of libraries to health sector development.

## References

- Alpi, K. M., Del Biondo, K. M., & Rethlefsen, M. L. (2024). Evolving from public health libraries as a place to focus on public health librarian expertise. *Journal of the Medical Library Association: JMLA*, 112(2), 95.
- Ayungu, J. (2024). Analysis of health workers' use of libraries and digital platforms in accessing and sharing health information in Tanzania. *International Information & Library Review*, 1-9.  
<https://doi.org/10.1080/10572317.2024.2378911>

- Bloss, J. E., LePrevost, C. E., Cofie, L. E., & Lee, J. G. (2022). Creating information resources and training for farmworker-serving community health workers. *Journal of the Medical Library Association: JMLA*, 110(1), 113.
- Charbonneau, D. H., & Vardell, E. (2022). The impact of COVID-19 on reference services: A national survey of academic health sciences librarians. *Journal of the Medical Library Association: JMLA*, 110(1), 56.
- Ekerere, J. N., Eze, M. E., Benson, V. O., & Ebo, M. O. (2019). Medical libraries and the provision of health information services in Nigeria: Aligning with Sustainable Development Goals (SDGs). *Journal of Applied Information Science and Technology*, 12(2), 171 – 178.
- Jameson, J., & Duhon, L. (2023). A 10-year follow-up survey of US academic libraries highlights the COVID-19 experience and greater interest in health information outreach. *Health Information & Libraries Journal*, 40(3), 275-291. <https://doi.org/10.1111/hir.12446>
- Jan, S. U., Ullah, S., & Khan, G. (2021). Impact of medical libraries on clinical decision-making in Pakistan. *Library Philosophy and Practice*, 4689.
- Kelham, C. (2014). Health care librarians and information literacy: an investigation. *Health Information & Libraries Journal*, 31(3), 235-238.
- Khan, K. S., Kunz, R., Kleijnen, J., & Antes, G. (2003). Five steps in conducting a systematic review. *Journal of the Royal Society of Medicine*, 96(3), 118-121.
- Knapp, A. A., Hersch, E., Wijaya, C., Herrera, M. A., Kruzan, K. P., Carroll, A. J., ... & Mohr, D. C. (2023). “The library is so much more than books”: Considerations for the design and implementation of teen digital mental health services in public libraries. *Frontiers in Digital Health*, 5, 1183319.
- Knüttel, H., Krause, E., Semmler-Schmetz, M., Reimann, I., & Metzendorf, M. I. (2020). Health sciences libraries in Germany: New directions. *Health Information & Libraries Journal*, 37(1), 83-88.
- Lenstra, N., Flaherty, M. G., & MLS, M. (2020). Closing the gap: Public libraries and public health. *Delaware Journal of Public Health*, 6(4), 40.
- Manyazewal, T. (2017). Using the World Health Organization health system building blocks through survey of healthcare professionals to determine the performance of public healthcare facilities. *Archives of Public Health*, 75(1), 50. <https://doi.org/10.1186/s13690-017-0221-9>
- Morton, S., Pencheon, D., & Squires, N. (2017). Sustainable Development Goals (SDGs) and their implementation: A national global framework for health, development and equity needs- a systems approach at every level. *British Medical Bulletin*, 124(1), 81-90.

- Okafor, A. I., Njoroge, R., & Kimani, G. (2023). Availability and utilization of library resources for enhanced service-delivery of healthcare workers in government tertiary hospitals, Abuja Nigeria. *International Journal of Science and Applied Information Technology*, 12(1).
- Popay, J., Rogers, A., & Williams, G. (1998). Rationale and standards for the systematic review of qualitative literature in health services research. *Qualitative Health Research*, 8(3), 341-351.
- Popay, J., Roberts, H., Sowden, A., Petticrew, M., Arai, L., Rodgers, M., & Duffy, S. (2006). Guidance on the conduct of narrative synthesis in systematic reviews. A product from the ESRC methods program, Version, 1(1), b92.
- Swanberg, S. M., Bulgarelli, N., Jayakumar, M., Look, E., Shubitowski, T. B., Wedemeyer, R., & Lucia, V. C. (2022). A health education outreach partnership between an academic medical library and public library: lessons learned before and during a pandemic. *Journal of the Medical Library Association: JMLA*, 110(2), 212.
- Walker, P. (2021). The library's role in countering infodemics. *Journal of the Medical Library Association: JMLA*, 109(1), 133.
- World Health Organization. (2024). *Sustainable development goals*. World Health Organization.
- Wude, H., Woldie, M., Melese, D., Lolaso, T., & Balcha, B. (2020). Utilization of routine health information and associated factors among health workers in Hadiya Zone, Southern Ethiopia. *PloS one*, 15(5), e0233092.
- Zager, S., Haskins, A., Maland, K., & Holt, C. (2016). The health and libraries of public use retrospective study (HeLPURS). *Health Information & Libraries Journal*, 33(3), 190-203.