

## Availability and Utilization of E-Library Resources within the Department of Community Medicine, Ahmadu Bello University (ABU), Zaria

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### Abstract

*This paper presents an empirical analysis of the availability and utilization of e-library resources within the Department of Community Medicine at the College of Medical Sciences, Ahmadu Bello University (ABU), Zaria, framed within the Technology Acceptance Model (TAM) as its conceptual foundation. The TAM framework suggests that users are more likely to adopt and consistently utilize resources they perceive as beneficial to their academic work and relatively easy to access and navigate. Using a descriptive survey design, quantitative data were collected from academic staff, postgraduate and undergraduate students, and research personnel to examine the availability and utilization of e-library resources. The data, analyzed through descriptive statistics such as frequencies and percentages, were displayed in tables and charts to highlight availability and usage trends. Findings reveal a strong reliance on core e-library resources, particularly online journals, research databases, and clinical decision-support tools, underscoring their perceived usefulness in enhancing research performance. Despite these positive outcomes, the study identifies critical challenges that limit the full potential of e-library systems. The dominance of research databases, e-journals, and e-books suggests that other valuable resources (e.g., theses and dissertations, conference proceedings, case studies, field reports, and multimedia materials) remain underutilized. From the perspective of TAM, this underutilization may reflect lower perceived usefulness or ease of use of these resources, which discourages adoption despite their availability. This imbalance highlights the need for the Department to diversify e-library collections and implement strategies that enhance awareness, usability, and perceived relevance of less frequently accessed resources.*

**Keywords:** E-library Resources; Research Productivity; Community Medicine; Empirical Analysis; Ahmadu Bello University.

### Introduction

The growing dependence on electronic information resources has reshaped the landscape of academic research by enabling faster, broader, and more efficient access to knowledge. Unlike traditional libraries that are often constrained by physical space, limited collections, and slower

acquisition processes, e-libraries provide researchers with immediate entry to vast databases, journals, and digital archives. This transformation is particularly significant in disciplines that demand up-to-date information, such as medicine and public health, where the ability to consult the latest evidence directly influences the quality of research outcomes (Parmar, 2025; Shaiwale, 2024; Uwizeye et al., 2021). By bridging geographical and temporal barriers, e-library systems have liberalized access to scholarly materials, ensuring that researchers in diverse contexts can participate in global knowledge production and dissemination.

In Nigeria, the adoption of e-library systems reflects a strategic response to long-standing challenges in higher education, including inadequate funding for physical collections and reliance on outdated materials. Tertiary institutions, including Ahmadu Bello University (ABU), Zaria, have recognized that sustaining competitive research output requires investment in digital infrastructures that align with international standards (Olubiyo & Olubiyo, 2023; Sadiku et al., 2021; Uchechukwuka, 2023). These e-libraries not only expand the range of accessible resources but also foster collaboration, innovation, and efficiency among faculty, postgraduate students, and research staff. By integrating electronic resources into academic workflows, universities enhance the capacity of their researchers to generate impactful scholarship, thereby strengthening their role in addressing pressing societal issues such as community health and medical practice.

### **Problem Statement/Objective of the Paper and Conceptual Framework**

Despite the efforts by tertiary institution in adopting e-library systems, empirical evidence remains scarce regarding the nature/composition, and how these e-library resources are actually utilized in academic research activities at departmental levels. This study seeks to address this gap by examining the availability and utilization of e-library resources within the Department of Community Medicine in the Faculty of Clinical Sciences, College of Medical Sciences, ABU Zaria. Accordingly, the study is guided by three research questions: (i) What types of e-resources are available for research in the Department of Community Medicine? (ii) To what extent do researchers in the Department of Community Medicine utilize e-library resources? And (iii) Which e-library resources are most frequently accessed by researchers in the department?

To guide this investigation and answer the questions, the study adopts the Technology Acceptance Model (TAM) as its conceptual framework. TAM is an information systems framework that explores how individuals come to embrace and apply new technologies. It emphasizes two primary factors: perceived usefulness and perceived ease of use. According to the model, technology adoption increases when users believe a system will improve their performance while demanding minimal effort to operate (Marikyan & Papagiannidis, 2025; Schorr, 2023). Applied to e-library resources, TAM provides a lens for understanding how researchers' perceptions of usefulness and ease of access shape their patterns of utilization and, ultimately, their research productivity. By situating the study within this framework, the analysis not only identifies the types of e-resources available and their frequency of use but also interprets utilization behaviors in relation to the broader dynamics of technology adoption in academic research.

## Methodology

To address the research questions, the study employed a descriptive survey design, which is suitable for gathering quantitative data on respondents' access to, use of, and perceptions regarding e-library resources. The target population consisted of all researchers within the Department of Community Medicine, Ahmadu Bello University, Zaria, including faculty members, postgraduate students, research staff and undergraduates actively engaged in scholarly activities. A convenient sampling technique was adopted to select 100 respondents, strictly individuals who regularly utilize the e-library for research purposes, in order to enhance the relevance and accuracy of the findings. Inclusion criteria required respondents to be affiliated with the department and faculty, and to have experience using the e-library, while those without such engagement were excluded. Data collection was carried out using a structured questionnaire developed in alignment with the study objective and aforementioned questions. To establish content validity, the instrument was reviewed by subject-matter experts in library science and research methodology, ensuring that the items adequately captured the constructs under investigation. The questionnaire covered respondents' educational background, types of e-library resources available, extent of utilization, and frequently accessed resources. Out of 100 questionnaires distributed, 98 were duly completed and deemed valid for analysis, yielding a response rate of 98%. The data was analyzed using descriptive statistics and presented in charts and tables for clarity.

## Results

### Response Rate

Out of the 100 questionnaires administered to staff of the Department of Community Medicine, Ahmadu Bello University, Zaria, 98 were duly completed and returned, representing a 98% response rate. This high return rate indicates strong participant engagement and provides a robust basis for data analysis.

### Educational Background of Respondents

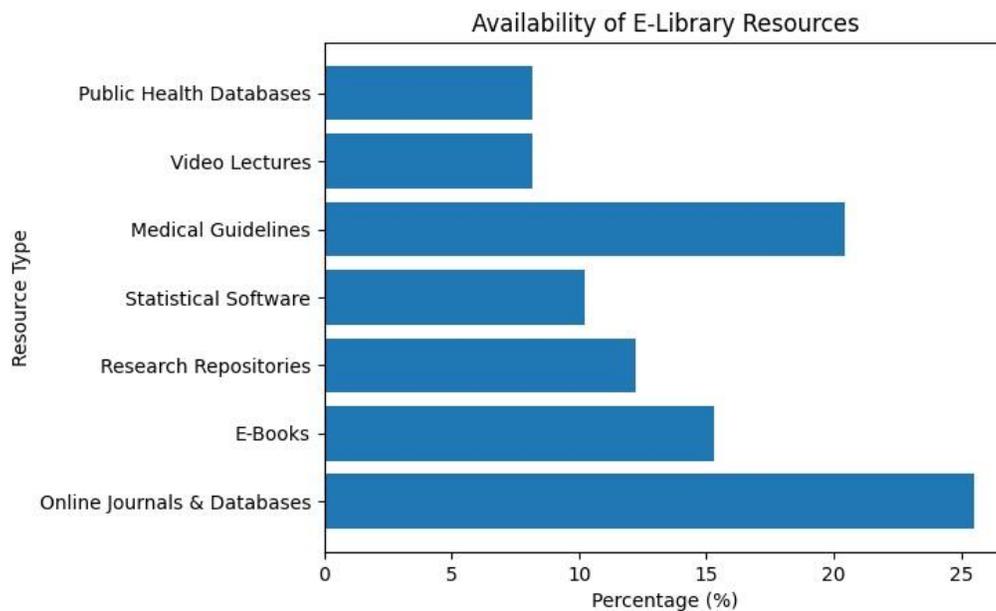
**Table 1**

*Educational background of respondents in the Department of Community Medicine*

Statement	Frequency	Percentage %
ND	15	15.3%
NCE	17	17.4%
DEGREE/HND	40	40.8%
MASTERS/PHD	26	26.5%
TOTAL	98	100%

Table 1 is a representation of respondents’ educational qualifications, which reveals a dominance of highly educated staff, suggesting a strong capacity for effective utilization of advanced e-library resources. It shows the educational qualifications of respondents in the Department of Community Medicine. The chart indicates that a substantial proportion of respondents hold Degree/HND qualifications and postgraduate degrees, while fewer respondents, mostly undergraduates, are holders of NCE and ND qualifications from previous education.

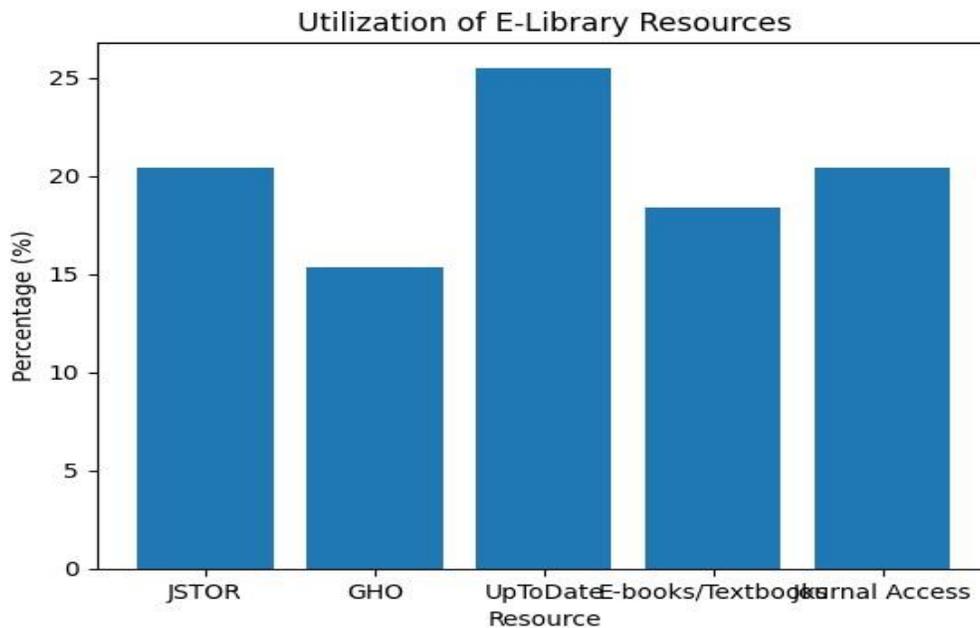
**Availability of E-Library Resources**



***Figure 1: Availability of different types of e-library resources in the Department of Community Medicine.***

Figure 1 is a clustered bar chart that clearly illustrates the disparity in availability levels across different e-library resource types. It presents the availability of various e-library resources within the department. Online journals and databases constitute the most available resources, followed by medical guidelines and protocols and e-books. Research repositories and statistical software and tools show moderate availability, while video lectures and webinars and public health databases are least available.

### Utilization of E-Library Resources



*Figure 2: Extent of utilization of selected e-library platforms by researchers.*

Figure 2 is a horizontal bar chart that effectively demonstrates usage intensity across the different platforms, highlighting the prominence of clinical decision-support tools. It illustrates the extent of utilization of selected e-library platforms. UpToDate resources emerge as the most frequently used resource, underscoring its relevance for clinical decision-making. JSTOR and journal access platforms follow closely, while e-books/textbooks and the Global Health Observatory show moderate levels of use.

### Most Frequently Accessed E-Library Resources

**Table 2**  
*Most Frequently Accessed E-Library Resources*

S/N	Library Resource	Frequency	Percentage%
1	E-Journals	25	25.5%
2	E-Books	18	18.4%
3	Research Databases	30	30.6%
4	Theses and Dissertations	10	10.2%
5	Conference Proceedings	7	7.1%
6	Case Studies and Field Reports	5	5.1%
7	Multimedia Resources	5	5.1%
	<b>TOTAL</b>	<b>98</b>	<b>100%</b>

Table 2 depicts the frequency of access to different categories of e-library resources. Research databases account for the highest proportion of access, followed by e-journals and e-books. Theses and dissertations and conference proceedings are less frequently used, and case studies and field reports and multimedia resources are accessed least frequently. This distribution highlights researchers' a clear preference for comprehensive, peer-reviewed, and data-rich resources, which are essential for contemporary research and evidence-based public health practice.

## **Discussion**

The findings of this study demonstrate a generally favorable environment for the use of electronic library resources within the Department of Community Medicine, Ahmadu Bello University, Zaria. The predominance of respondents with degree and postgraduate qualifications suggests a workforce and library users that are academically equipped to engage with advanced electronic information systems. In other words, the educational profile indicates that the department is largely staffed by academically qualified personnel, and the library used by academically-inclined users, which is likely to influence both awareness and effective use of electronic information resources. Such educational profile is likely to enhance awareness, information literacy, and effective utilization of e-library resources, consistent with expectations in research and practice-oriented medical departments.

### **Availability of e-library resources**

The results further reveal that the availability of e-library resources is uneven across resource types. Online journals, databases, and medical guidelines are the most available, reflecting an institutional emphasis on evidence-based medicine, research productivity, and academic publishing. Conversely, the relatively low availability of multimedia resources and specialized public health databases suggests gaps that may limit exposure to alternative learning formats and emerging data-driven public health tools. Similar patterns have been reported in recent studies, where subscription-based journals and databases are prioritized over multimedia and specialized datasets due to cost, licensing, and infrastructure constraints (Khan & Tyagi, 2025; Yahaya, 2025; Hall et al., 2025). This imbalance indicates that while core academic needs are being met, opportunities exist to broaden resource diversity to support teaching innovation and interdisciplinary research. Overall, the results suggest that the department prioritizes resources that support evidence-based practice and academic publishing, while multimedia and specialized data platforms receive comparatively less emphasis.

### **Utilization of e-library resources**

Utilization patterns closely mirror availability trends, with clinically oriented and peer-reviewed platforms such as UpToDate, JSTOR, and journal access portals being the most frequently used, which further reinforce the applied and research-driven orientation of the department. This underscores the applied nature of community medicine, where timely access to reliable clinical and research evidence is critical. The moderate use of e-books and global health databases further reflects their relevance for both teaching and population health research, although their utilization could be enhanced through targeted training and awareness initiatives. This aligns with findings

from comparable studies in medical and health sciences faculties, which consistently report higher usage of decision-support tools and scholarly journals than general e-books or multimedia resources (Egle et al., 2015; Pant et al., 2025; da Fonseca et al., 2021; Habib et al., 2022). Such convergence suggests that discipline-specific needs significantly shape e-library usage behavior, indicating a strong reliance on clinically oriented and peer-reviewed resources, and reflecting the applied and research-driven nature of community medicine.

### **Most frequently accessed e-library resources**

The dominance of research databases, e-journals, and e-books among the most frequently accessed resources highlights a strong research culture within the department. The dominance of research databases and e-journals as the most frequently accessed resources also mirrors trends observed in recent studies across universities in sub-Saharan Africa, where researchers prioritize comprehensive and data-rich sources to meet publication and postgraduate research requirements (Osinulu, 2020; Yahaya, 2025; Harger, 2008). Conversely, the limited use of conference proceedings, theses, and multimedia resources suggests underutilization of complementary knowledge sources that could enrich academic discourse and professional development, which is consistent with evidence from similar studies indicating limited awareness, perceived relevance, or ease of access to these resource categories (Anyaku, 2015; Harger, 2008).

From the perspective of the Technology Acceptance Model (TAM), the dominance of research databases, e-journals, and e-books among the most frequently accessed resources, coupled with the underutilization of e-library resources such as theses, dissertations, conference proceedings, case studies, field reports, and multimedia materials stems from users' perceptions of their limited usefulness and low ease of use, which are the two key determinants of technology adoption (Marikyan & Papagiannidis, 2025; Schorr, 2023). When researchers view these resources as less relevant, outdated, or offering minimal contribution to research outcomes, their perceived usefulness declines; similarly, if accessing them is cumbersome, poorly organized, or technically challenging compared to more user-friendly platforms like databases and e-journals, their perceived ease of use is reduced. This dual perception creates barriers to adoption, leading users to favor resources they find more efficient and directly beneficial. Therefore, availability alone does not ensure utilization. This underscores the need to improve resource design, accessibility, and awareness initiatives to enhance perceptions of value and usability, thereby promoting more balanced and comprehensive use of e-library collections.

Overall, the findings indicate that while e-library resources are both available and actively utilized for core academic and clinical purposes, strategic expansion of resource types and user support could further strengthen research output and learning outcomes in the department. Also, when compared with related recent studies, the results from ABU, Zaria, suggest a relatively positive level of alignment between resource availability and utilization, particularly for core academic and clinical needs. Nonetheless, the findings also highlight a common challenge in comparable contexts: the need to diversify e-library collections and promote balanced utilization through user training, improved infrastructure, and targeted awareness programmes (Frandsen et al., 2017;

Khan et al., 2025; Okeke et al., 2019). Addressing these gaps could enhance academic effectiveness, and holistic knowledge acquisition within the department.

## Conclusion

The study examined the availability and utilization of e-library resources within the Department of Community Medicine. The findings confirm that e-library resources play a critically supportive role in research activities within the Department of Community Medicine. However, challenges point to the need to diversify e-library collections and promote balanced utilization through user training, improved infrastructure, and targeted awareness programs. Addressing these barriers could further improve the impact of e-library resources on academic research activities within the Department.

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