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Impact of Medical Textbooks and Current Awareness Service on Information Utilization Among Medical Students in Federal Teaching Hospital Libraries in North-West Nigeria

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Abstract

The study investigated the effect of medical textbooks and Current Awareness Services (CAS) on the utilization of information by medical students in Federal Teaching Hospital Libraries in North-West Nigeria. Specific aims were to understand the individual effects of medical textbooks and CAS on the use of information and the combined effect of the two. The study used descriptive correlational survey research design. The population consisted of 642 clinical medical students from five selected Federal Teaching Hospital Libraries in North-West Nigeria, while the sample size of 246 respondents was obtained from the population using the Yamane formula. A structured questionnaire validated by experts was used to collect data. After a pilot study with 30 respondents, the instrument was found to have an overall Cronbach's alpha reliability coefficient of 0.910. Descriptive statistics (mean and standard deviation) and simple and multiple linear regression analyses were used to analyse the data at the 0.05 level of significance. The results shown in the manuscript revealed that medical textbooks had a high perceived impact on information utilization with a grand mean of 2.80. The manuscript, however, did not give a verified descriptive result for Current Awareness Services. The regression results reported showed that 10.9% of the variance in information utilization could be explained by the medical textbooks. The reported combined regression model was also statistically significant ($R^2 = 0.122$), ($F(2,237) = 16.404$), ($p < 0.001$); however, the predictor variables in the reported model need to be verified to ensure that they are in line with medical textbooks and CAS. The study reveals the need to equip students with relevant medical textbooks and appropriate current awareness mechanisms to facilitate their academic learning, assignment preparation, research, presentation development and clinical learning. Federal Teaching Hospital Libraries are recommended to have sufficient and up-to-date medical textbooks, enhance CAS by timely notification of new books and medical literature and offer support to students in information literacy to enable them to retrieve, evaluate and effectively use medical information.

Keywords: *Medical textbooks, Current Awareness Services, information utilization, medical students, Federal Teaching Hospital Libraries, North-West Nigeria.*

Introduction

Medical education depends on the systematic acquisition, evaluation and application of reliable information to support foundational learning, research and clinical preparation. Medical students are required to understand complex biomedical concepts, interpret scientific evidence and continually update their knowledge as medical practice evolves. These demands make access to relevant information resources and effective library services an important component of medical education. Medical textbooks and Current Awareness Services (CAS) serve

complementary purposes within this information environment. Textbooks provide structured explanations of medical concepts and principles, while CAS helps users identify new publications and developments relevant to their information needs. However, the educational value of these resources depends not merely on their availability but also on their accessibility, relevance and actual utilization by students.

Medical textbooks provide organized and relatively comprehensive treatments of subjects such as anatomy, physiology, pathology, pharmacology and clinical medicine. They can help students establish foundational knowledge, understand relationships between medical concepts and prepare for examinations, assignments and clinical learning. Nevertheless, changes in medical education have influenced students' preferences for learning materials, with digital platforms, online study guides and third-party resources increasingly complementing traditional textbooks. Halperin et al. (2024), in a survey involving 560 medical students from 102 medical schools in the United States, found that online study guides were the most frequently reported learning resources, followed by lectures and spaced-repetition flashcards. Their findings demonstrate that medical students draw on multiple resources rather than relying exclusively on conventional teaching materials. Although the study did not establish that textbooks were no longer useful, it highlighted the changing information environment in which medical libraries must support students' learning needs. Evidence on textbook use also indicates that the type of learning resource selected may be associated with academic performance. Ranabhat et al. (2024) examined learning resource use among medical students during the basic science stage and found that students who used textbooks had significantly higher mean examination scores than those who did not use them. Textbook use was also more prevalent among the highest-performing students in their sample. However, the researchers observed that the use of multiple commercial resources covering similar content was not necessarily associated with better academic performance.

These findings suggest that the educational value of learning materials should not be assessed solely by the number of resources available to students. Instead, attention should be given to the relevance of the resources and how students incorporate them into their learning. Since the study was conducted in a different educational context, its findings provide a useful basis for investigation rather than direct evidence of textbook utilization among medical students in Nigeria. Further evidence illustrates the complexity of students' decisions about learning resources. Lawrence et al. (2023) explored preclerkship medical students' use of third-party learning resources and found that students selected these materials for perceived benefits such as clarity, efficiency and concise presentation. Their choices were also influenced by how students encountered the resources and their perceptions of the formal curriculum.

Similarly, Berry et al. (2025) examined second-year medical students' use of resources outside the formal curriculum at two institutions. Their study contributed to the growing evidence that medical students combine institutional and external resources to address different learning requirements.

Taken together, these studies show that students' engagement with information resources is influenced by their learning needs and resource preferences. However, research on general learning-resource choices does not establish whether textbooks available through Federal Teaching Hospital Libraries are sufficiently utilized or how their use relates to students' wider information-use practices in North-West Nigeria. Beyond the provision of learning materials, medical libraries can support information discovery through Current Awareness Services. CAS refers to organized activities through which libraries notify users about newly available publications, recent journal articles, new acquisitions and other information developments relevant to their interests. These activities may include current-awareness bulletins, email alerts, notifications about new books and announcements of recently published research. In medical education, CAS can help students identify literature that supplements the foundational knowledge obtained from textbooks and provides opportunities to remain informed about developments in their fields of study. By directing attention to potentially relevant information, CAS may reduce the effort required to discover useful materials across different sources. Nevertheless, the value of a current-awareness service depends on whether users know about it, receive relevant and timely notifications, can access the recommended materials and subsequently use the information to meet their academic needs.

The distinction between information discovery and information utilization is particularly important in assessing CAS. A student may receive an alert about a new medical publication without opening it, assessing its relevance or applying its contents to an assignment, research activity or clinical learning task. Similarly, a library may provide a current-awareness service without knowing whether its notifications reach the intended users or contribute to their information-use practices. Therefore, the effectiveness of CAS should not be inferred solely from the existence of a service or the number of notifications distributed. It is necessary to examine how students engage with the

information identified through such services and whether CAS contributes to their use of information. Although studies of digital information seeking and external learning resources provide related insights, these behaviours should not be treated as direct measures of CAS effectiveness. Recent research in Nigeria provides a relevant context for examining these issues. Alabi (2026) investigated the use of library and information resources by medical students in the context of advanced technologies at Redeemer's University, Nigeria. The study contributes to understanding the information environment in which medical students engage with library resources and emerging technologies. In another Nigerian study, Ikolo et al. (2025) examined health information resources and services in hospital libraries, reporting that textbooks were among the resources provided and identifying inadequate funding for current physical and digital information as a major challenge.

While the latter study focused on patient-centred information services rather than the information-use practices of medical students, it highlights resource-provision challenges within Nigerian hospital library settings. Neither study, however, directly establishes the individual and combined impact of medical textbooks and CAS on information utilization among medical students in Federal Teaching Hospital Libraries in North-West Nigeria. The work of Jumare Mohammed Hamza and his collaborators also provides a relevant Nigerian perspective on the relationship between library resources, services and educational activities. Jumare and Mashina (2023) evaluated library application software for enhancing teaching and learning in selected Federal Colleges of Education in Nigeria. Their findings identified inadequate funding and insufficient staff training as challenges affecting the use of library application software and recommended improved support for users. Although their research focused on library application software rather than medical textbooks or CAS, it highlights the importance of institutional support and effective library systems in facilitating information access and use. Similarly, Hamza and Shehu (2025) examined the role of mobile technology in enhancing learning and research in North-West universities of Nigeria. Their work is relevant to the regional context of the present study and the wider role of information-support mechanisms in learning and research. Nevertheless, mobile technology is distinct from CAS, just as library application software is distinct from the provision and use of medical textbooks. These studies therefore provide contextual and conceptual support without substituting for direct empirical evidence on the two variables examined in the present research.

Information utilization in the present study refers to the use of information obtained through medical textbooks and CAS to support academic learning, assignment preparation, research activities, presentation development, examination preparation and clinical learning. This definition distinguishes information utilization from the mere availability of resources or access to information notifications. A student may have access to a textbook or receive an alert about a new publication without applying the information to a specific learning task. Accordingly, examining information utilization requires attention to the extent to which students use information to address their academic and learning needs. Medical textbooks may provide a foundation for understanding medical concepts, while CAS may help students identify additional and more recent information. Studying these variables together can provide insight into their separate and combined relationships with information-use practices.

Despite the growing literature on medical students' learning resources, digital information access and library services, an important question remains concerning the contribution of medical textbooks and CAS to information utilization in Federal Teaching Hospital Libraries in North-West Nigeria. The studies discussed above examine related but distinct issues, including students' use of learning resources, library application software, mobile technology and hospital library information provision. They do not directly establish the individual and combined impact of medical textbooks and CAS on information utilization among medical students in the specified setting. This gap is important because evidence from other countries, institutions or user populations cannot automatically be generalized to medical students in North-West Nigeria. Furthermore, evidence about general electronic resource use or technology adoption cannot establish the effectiveness of CAS without examining the service itself. The present study therefore addresses a specific empirical question concerning two complementary components of the medical library information environment.

Accordingly, this study examines the impact of medical textbooks and Current Awareness Services on information utilization among medical students in Federal Teaching Hospital Libraries in North-West Nigeria.

Statement of the Problem

Medical textbooks and Current Awareness Services (CAS) are important components of the information environment supporting medical education. Medical textbooks are expected to provide students with structured and authoritative knowledge of medical concepts, diseases, diagnostic procedures and treatment approaches, while CAS is expected to alert users to newly available publications and relevant developments in medical knowledge. When these resources and services are accessible, relevant and effectively used, they can support

students' academic learning, assignment preparation, research activities, examination preparation and clinical learning. Federal Teaching Hospital Libraries therefore have an important role in providing suitable medical textbooks and facilitating awareness of current medical information.

Nevertheless, empirical studies indicate that the relationship between resource availability and effective information use is not straightforward. Ranabhat et al. (2024) found that medical students who used textbooks had significantly higher examination scores than non-users, although their findings arose from a specific medical education context and do not establish that textbook use produces the same outcomes in other settings. In Nigeria, Oladeji and Alegebeleye (2026) reported high utilization of electronic information resources among medical students in federal universities in South-West Nigeria, but their analysis found no statistically significant influence of the measured web-based information-seeking behaviours on electronic resource utilization. These findings point to an important distinction: the availability of information resources and students' information-seeking activities do not, by themselves, establish how effectively particular resources contribute to information utilization.

Related studies by Jumare and Mashina (2023) on library application software and Hamza and Shehu (2025) on mobile technology in learning and research in North-West Nigerian universities also demonstrate the relevance of library systems and information-support mechanisms to educational activities. However, these studies examined different variables and do not directly establish the contribution of medical textbooks or CAS to information utilization among medical students in Federal Teaching Hospital Libraries. Furthermore, research on general electronic resource use does not necessarily explain whether students receive, access and apply information identified through current-awareness notifications. Thus, evidence about related resources and technologies cannot fully resolve the specific questions raised by the present study.

The unresolved issue is whether medical textbooks and CAS make meaningful contributions to information utilization among medical students in Federal Teaching Hospital Libraries in North-West Nigeria. In particular, the extent to which students use medical textbooks to support their academic and clinical learning, and the contribution of CAS in helping them identify and use relevant information, require direct empirical investigation. Although studies conducted in other contexts provide useful insights into medical students' resource preferences and information-use practices, their findings cannot automatically be generalized to the selected teaching hospital libraries. A focused investigation is therefore needed to establish evidence specific to these institutions and their medical students.

Consequently, this study investigates the impact of medical textbooks and Current Awareness Services on information utilization among medical students in Federal Teaching Hospital Libraries in North-West Nigeria. Specifically, it seeks to determine the impact of medical textbooks on information utilization and examine the impact of CAS on information utilization. The findings are expected to provide evidence that may guide textbook collection development, improvement of current-awareness activities and the planning of library services that respond more effectively to medical students' information needs.

Aim and Objectives of the Study

The aim of this study is to examine the impact of medical textbooks and Current Awareness Services on information utilization among medical students in Federal Teaching Hospital Libraries in North-West Nigeria.

The specific objectives are to:

1. Determine the impact of medical textbooks on information utilization among medical students in Federal Teaching Hospital Libraries in North-West Nigeria.
2. Examine the impact of Current Awareness Services on information utilization among medical students in Federal Teaching Hospital Libraries in North-West Nigeria.

Research Questions

The following research questions guide the study:

1. What is the impact of medical textbooks on information utilization among medical students in Federal Teaching Hospital Libraries in North-West Nigeria?
2. What is the impact of Current Awareness Services on information utilization among medical students in Federal Teaching Hospital Libraries in North-West Nigeria?

Research Hypotheses

The following null hypotheses will be tested at the 0.05 level of significance:

$H_{o}1$: Medical textbooks have no significant impact on information utilization among medical students in Federal Teaching Hospital Libraries in North-West Nigeria.

$H_{o}2$: Current Awareness Services have no significant impact on information utilization among medical students in Federal Teaching Hospital Libraries in North-West Nigeria.

$H_{o}3$: Medical textbooks and Current Awareness Services do not jointly have a significant impact on information utilization among medical students in Federal Teaching Hospital Libraries in North-West Nigeria.

Literature Review

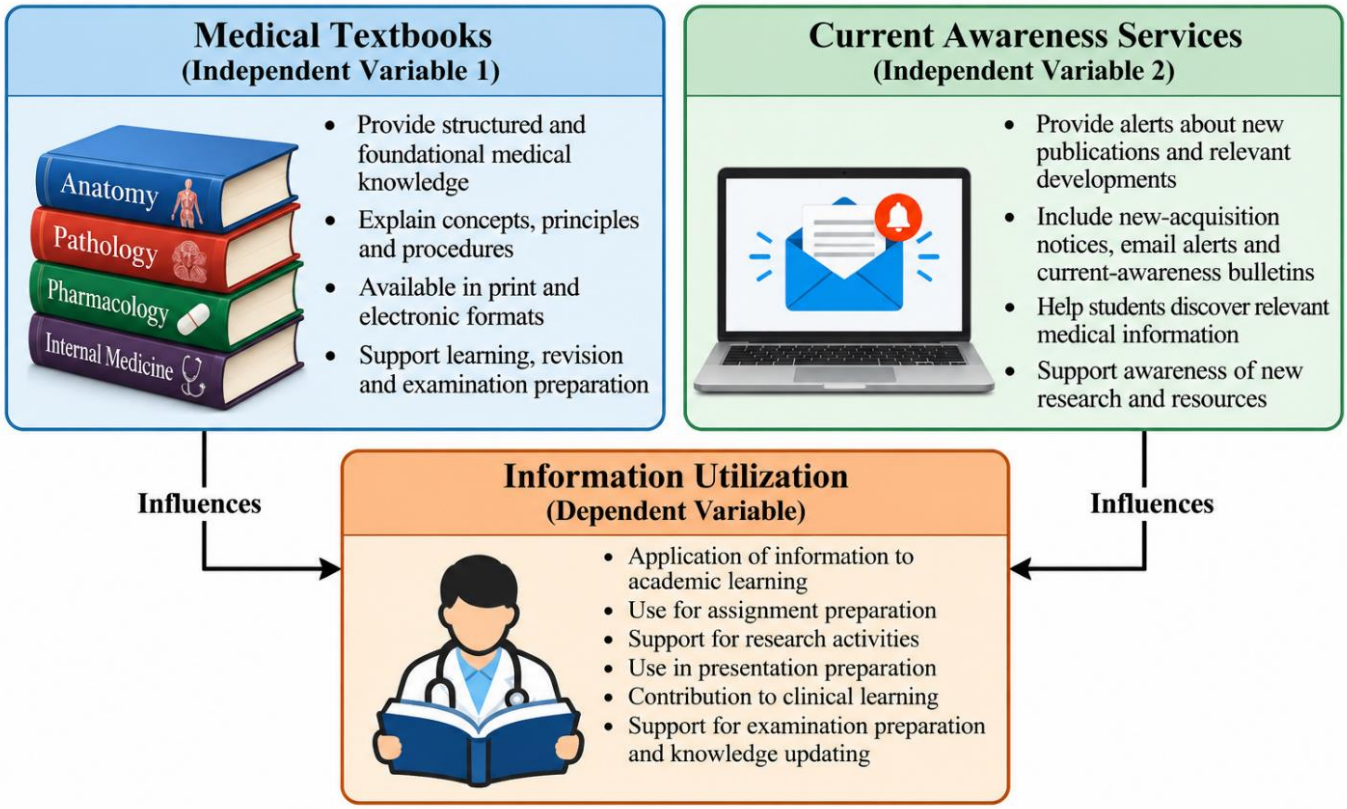


Figure 2.1: Conceptual Review

(Source: Author's conceptualization, 2026)

Concept of Medical Textbooks

Medical textbooks are educational publications that present medical knowledge, principles, concepts and procedures in a structured and systematic manner. They cover major areas of medical science, including anatomy, physiology, biochemistry, pathology, pharmacology, microbiology and clinical medicine. For medical students, textbooks provide foundational knowledge that supports classroom instruction, independent study, examination preparation and the development of clinical understanding. Their organised chapters, diagrams, illustrations, tables and clinical examples help students understand complex medical concepts and revisit information when preparing for assignments, presentations, practical sessions and examinations.

Medical textbooks are available in printed and electronic formats, each offering distinct benefits for learning and information access. Printed textbooks allow students to read and annotate materials without depending on internet connectivity and may be useful for extended reading and revision. Electronic textbooks offer searchable text, portability and convenient access through computers, tablets and smartphones, subject to device availability and access arrangements. Students' preferences may depend on their reading habits, learning needs, the nature of the subject and the accessibility of the materials provided by their libraries. The continuing availability of both formats can therefore help libraries accommodate different study practices and information requirements.

Recent research supports the importance of examining how medical students select and use learning resources. Ranabhat et al. (2024) investigated learning-resource use among medical students and reported that students who used textbooks achieved higher mean examination scores than those who did not. However, the findings arose from a particular educational context and should not be assumed to apply identically to every medical school or library setting. The study nevertheless provides a reason to examine textbook use as part of students' learning practices rather than treating the presence of textbooks in a library as sufficient evidence of their educational contribution.

In the context of the present study, medical textbooks refer to printed and electronic books containing foundational and specialised medical knowledge that are available to medical students through Federal Teaching Hospital Libraries in North-West Nigeria. Their impact on information utilization concerns the extent to which students use information obtained from these textbooks for academic learning, assignment preparation, research activities, presentation development, examination preparation and clinical learning. The focus is therefore on the contribution

of medical textbooks to students' information-use practices rather than their availability alone.

Concept of Current Awareness Services

Current Awareness Services (CAS) are library services designed to keep users informed about newly published materials, recently acquired resources and developments relevant to their academic, research and professional interests. In medical libraries, CAS may include notifications about new medical textbooks, recently published journal articles, updates from electronic databases, new acquisitions lists, email alerts and announcements about relevant medical research. The purpose of these services is to help users discover information that may be useful to their current and emerging information needs without having to search repeatedly for every new publication. CAS is particularly relevant to medical education because medical knowledge and research continue to develop. Medical students require foundational information to understand established concepts as well as opportunities to identify new literature that can supplement their learning. Through current-awareness notifications, librarians can direct students to relevant resources for assignments, research projects, presentations and clinical learning. When the information is relevant and accessible, CAS may help students identify useful publications more efficiently and remain informed about developments in their areas of study.

Popoola et al. (2020), in their study of the state of services and challenges in Nigerian medical libraries, found that some libraries provided specialised services that included Current Awareness Services and Selective Dissemination of Information. However, their findings also indicated that medical library services faced challenges, including limited user engagement and insufficient provision of some specialised services. These findings provide a Nigerian context for investigating the availability and contribution of CAS, although the study did not directly measure its impact on medical students' information utilization. Internationally, Creazzo and Norman (2022) described the development of a medical library current-awareness service called Hot Topics, which was designed to keep users informed about relevant developments, promote engagement with research and improve awareness of library resources and services. Their study illustrates how CAS can be used to connect users with relevant information and support research activities. However, evidence from an individual service in a United States hospital setting cannot automatically establish the effectiveness of CAS in Nigerian teaching hospital libraries.

In the context of this study, Current Awareness Services refer to the activities provided by Federal Teaching Hospital Libraries in North-West Nigeria to inform medical students about new medical information resources and relevant developments. Their impact on information utilization concerns the extent to which students use information identified through these services for academic learning, assignment preparation, research activities, presentation development, examination preparation and clinical learning. The focus is therefore on whether CAS helps students identify and use relevant information rather than simply whether notifications or alerts are provided.

Concept of Information Utilization

Information utilization refers to the process through which individuals apply information obtained from different sources to meet specific needs, acquire knowledge, make decisions and accomplish tasks. It involves more than locating or accessing information, as users must identify relevant information and apply it to their particular circumstances. In higher education, information utilization is important because students rely on information resources to understand concepts, complete assignments, conduct research and develop knowledge within their disciplines. Sezer (2020) examined the implementation of an information literacy course for undergraduate medical students, emphasizing the importance of helping students access information, evaluate its accuracy and use it appropriately. This demonstrates that effective information utilization involves skills beyond information retrieval.

Among medical students, information utilization is particularly important because medical education requires the acquisition and application of knowledge about human anatomy, diseases, diagnosis, treatment and patient care. Students use textbooks, scholarly publications, electronic databases and other information resources to support their academic and clinical learning. Alabi (2026), in a study of medical students at Redeemer's University, Nigeria, reported that students used library and information resources for examination preparation, class assignments, research and knowledge development. The findings illustrate the different purposes for which medical students apply information to their educational activities.

Information utilization also depends on students' ability to access and engage with relevant information resources. Effiong and Agboke (2022) investigated information access tools and the utilization of information resources among medical students in federal universities in South-South Nigeria. Their findings indicated a significant influence of information access tools on information resource utilization. This suggests that the availability of appropriate access mechanisms may contribute to students' ability to use information resources effectively. In the context of the present study, information utilization refers to the extent to which medical students in Federal Teaching Hospital Libraries in North-West Nigeria apply information

obtained from medical textbooks and Current Awareness Services (CAS) to support academic learning, assignment preparation, research activities, presentation development, examination preparation and clinical learning. It is the dependent variable examined in relation to the two independent variables: medical textbooks and CAS. The focus is on the practical use of information obtained through these resources and services rather than their availability alone.

Theoretical Framework

The theoretical framework provides the foundation for understanding the relationship between medical textbooks, Current Awareness Services (CAS) and information utilization among medical students.

Wilson's Information Behaviour Model (1999)

This study is anchored in Wilson's Information Behaviour Model (1999), which explains how individuals recognise information needs, seek relevant information and use the information they obtain. The model is relevant to this study because medical students require information for academic learning, assignments, research, presentations, examination preparation and clinical learning. To meet these needs, they may consult medical textbooks and use Current Awareness Services to identify new publications and relevant medical information.

Wilson's model also explains why the availability of medical textbooks and CAS does not automatically guarantee information utilization. Students must recognise their information needs, locate relevant materials and apply the information to their academic activities. Factors such as resource availability, awareness of library services, information-searching skills and access barriers may influence this process.

Relevance of the Model to the Study

Wilson's Information Behaviour Model is relevant to this study in three main ways.

First, it explains how medical students' information needs may influence their use of medical textbooks and CAS. Students may consult textbooks to understand medical concepts and use CAS to identify recent publications and developments.

Second, the model highlights factors that may facilitate or hinder information seeking. Limited textbook availability, inadequate awareness of CAS and difficulties accessing relevant information may affect students' use of these resources and services.

Third, the model helps explain the relationship between information seeking and information utilization. Accessing a textbook or receiving a current awareness alert does not necessarily mean that the information will be applied. Students must use the information obtained to support their learning, assignments, research, presentations, examination preparation and clinical learning.

In the present study, medical textbooks and current awareness services are the independent variables, while information utilization is the dependent variable. Wilson's model provides a theoretical basis for examining how these resources and services relate to information utilization among medical students in Federal Teaching Hospital Libraries in North-West Nigeria.

Research Design

The study adopted a descriptive correlational survey research design. The design was considered appropriate because the study had both descriptive and correlational components. The descriptive component enabled the researcher to describe the existing status of the study variables, while the correlational component enabled the researcher to examine the statistical relationships among the variables without manipulating them. Creswell and Creswell (2022) explained that quantitative research designs are selected according to the research questions and the nature of the information required to address them. Their discussion of quantitative methods includes survey approaches for collecting and analysing numerical data. The descriptive component of the design was used to describe the existing conditions of the variables under investigation. Specifically, it was used to examine the impact of medical textbooks and current awareness services on information utilization among medical students in Federal Teaching Hospital Libraries in North-West Nigeria. The data collected through the questionnaire were summarized using descriptive statistics, including frequencies, percentages, means and standard deviations. This enabled the researcher to present the characteristics and responses of the respondents in a systematic manner. The correlational component was used to examine the relationships between the independent variables and the dependent variable in particular, the study examined the relationships between current awareness services, medical mobile applications and information utilization among medical students in Federal Teaching Hospital Libraries in North-West Nigeria. The variables were measured as they existed naturally, and no attempt was made by the researcher to manipulate or experimentally control them. Correlational approaches are appropriate where researchers seek to examine associations among measured variables rather than manipulate variables experimentally.

The correlational component also provided the basis for using regression analysis in the study. Regression analysis was employed to determine the statistical contributions of medical textbooks and current awareness services to

information utilization. Thus, the study went beyond describing the variables by examining their statistical relationships and estimating the individual and joint contributions of the predictor variables to the dependent variable. Research methods literature recognises correlation and regression as quantitative techniques for examining relationships among measured variables. Creswell and Creswell (2022) also emphasize that quantitative research involves the use of numerical data and statistical procedures to address research questions and hypotheses. The design was non-experimental because the researcher did not manipulate current awareness services or medical mobile applications. Instead, data were collected from respondents regarding the availability and use of these services and applications, as well as their relationship with information utilization, as they naturally occurred in the selected Federal Teaching Hospital Libraries in North-West Nigeria. This was suitable for the study because the purpose was to investigate the existing situation and statistical relationships among the variables rather than establish experimental cause-and-effect relationships. Consequently, the descriptive correlational survey research design was appropriate for the study because it enabled the researcher to describe the study variables and subsequently examine the relationships among them using correlational and regression analyses. The combination of descriptive statistics and inferential statistical procedures provided the basis for addressing the research questions and testing the hypotheses of the study.

Population of the Study

The population of this study comprises 642 active registered clinical medical students (400–600 level) in the Federal Teaching Hospital Libraries included in the study during the 2025/2026 academic session. Clinical medical students were considered appropriate because they are the primary users of medical textbooks and current awareness services available in teaching hospital libraries. Unlike pre-clinical students, who undertake mainly classroom-based instruction in the university environment, clinical medical students participate in hospital-based clinical training and frequently utilize library resources to support clinical learning, evidence-based practice, research, assignments and patient care.

The study population was drawn from the official records of registered clinical medical students in the respective institutions for the 2025/2026 academic session.

Table 1: Population Distribution of Clinical Medical Students in Selected Federal Teaching Hospital Libraries in North-West, Nigeria

S/N	Institution/Medical Library	State	Population of Active Registered Clinical Medical Students
1	Medical Library, Ahmadu Bello University Teaching Hospital (ABUTH), Shika-Zaria	Kaduna	195
2	Medical Library attached to Bayero University Library, Kano	Kano	125
3	Abdullahi Fodiyo Library Complex, Usmanu Danfodiyo University, Sokoto	Sokoto	105
4	Professor Bello Daura Library, Umaru Musa Yar'Adua University, Katsina	Katsina	74
5	Rasheed Shekoni Federal University Teaching Hospital (RSFUTH) Federal University Dutse Medical Library	Jigawa	143
	Total		**642**

Source: *Field Survey/Official Statistical Records from Selected University and Medical Libraries, 2026.*

Sample and Sampling

This study adopted a multistage sampling technique involving purposive sampling, proportionate allocation and simple random sampling. The multistage approach was considered appropriate because the study population is distributed across selected Federal Teaching Hospital Libraries in North-West Nigeria. Creswell and Creswell (2023) observed that multistage sampling is suitable for survey research involving populations spread across different locations because it enhances representativeness while minimizing sampling bias. The target population comprised 642 active registered clinical medical students drawn from five selected Federal Teaching Hospital Libraries in North-West Nigeria. The selected institutions include Medical Library, Ahmadu Bello University Teaching Hospital (ABUTH), Shika-Zaria, Kaduna State; Medical Library attached to Bayero University Library, Kano; Abdullahi Fodiyo Library Complex, Usmanu Danfodiyo University, Sokoto; Professor Bello Daura Library, Umaru Musa Yar'Adua University, Katsina Federal Teaching Hospital, Katsina (FTHK); and Rasheed

Shekoni Federal University Teaching Hospital (RSFUTH), Federal University Dutse Medical Library, Jigawa State. The following stages explain the process.

Stage One: Purposive Sampling

At the first stage, purposive sampling as a non-probability sampling technique was employed in the selection of the five study institutions based on specific criteria established in line with the objectives of the study. The selected institutions were major centres for medical education and clinical training and provided medical library and health information services to clinical medical students. The selection was therefore based on the relevance of the institutions to the research objectives rather than random selection. Following the selection of the five study institutions, the total number of eligible clinical medical students across the selected institutions was established to provide the basis for determining the sample size for the study. The combined population of active registered clinical medical students across the five selected institutions was 642. The sample size was therefore determined from this finite population using the Yamane (1967) formula, as presented below.

Sample Size Determination

The sample size for this study was determined using the Yamane (1967) formula, which is suitable for finite populations and survey research.

The formula is expressed as:

$$n = \frac{N}{1 + N(e)^2}$$

Where:

n = Sample size

N = Population size (642)

e = Level of precision (0.05)

Substituting the values into the formula:

$$n = \frac{642}{1 + 642(0.05)^2} = \frac{642}{1 + 642(0.0025)} = \frac{642}{1 + 1.605} = \frac{642}{2.605} \approx 246$$

The calculated sample size was approximately 246 respondents. This sample size was considered adequate for achieving representativeness and ensuring reliable findings for the study in line with the recommendation of Yamane (1967).

Stage Two: Proportionate Allocation

Following the determination of the sample size, proportionate allocation was employed to distribute the 246 respondents among the five selected institutions according to their respective population sizes. This ensured that each institution was represented proportionately within the sample. Nworgu (2021) noted that proportionate allocation enhances representativeness and fairness in survey studies involving heterogeneous populations.

The proportionate allocation formula is expressed as:

$$n_i = \frac{N_i}{N} \times n$$

Where:

(n_i) = sample allocated to the institution

(N_i) = population of the institution

N = total population (642)

n = total sample size (246)

For example, for Ahmadu Bello University Teaching Hospital (ABUTH):

$$n_i = \frac{195}{642} \times 246 = 74.65 \approx 75$$

The same formula was applied to the remaining institutions to obtain the proportionate sample allocation presented in Table 2.

Table 2: Proportionate Sample Allocation

Institution	Population ((N_i))	Calculation	Sample ((n_i))
ABUTH, Shika-Zaria	195	(195/642 × 246)	**75**
Bayero University Library, Kano	125	(125/642 × 246)	**48**

Usmanu Danfodiyo University, Sokoto	105	(105/642 × 246)	**40**
Umaru Musa Yar'Adua University	74	(74/642 × 246)	**28**
Federal University Dutse Medical Library	143	(143/642 × 246)	**55**
Total	**642**		**246**

Stage Three: Simple Random Sampling

At the final stage, simple random sampling was used to select the required number of respondents from each institution. Lists of active registered clinical medical students obtained from the respective institutions constituted the sampling frame. Each eligible student was assigned a unique identification number, after which the required number of respondents was selected using a simple random procedure. This ensured that every eligible clinical medical student had an equal probability of being selected, thereby minimizing selection bias and improving the representativeness of the sample.

Overall, the combination of purposive sampling, proportionate allocation and simple random sampling was considered appropriate for obtaining a representative sample for examining the impact of current awareness services and medical mobile applications on information utilization among medical students in Federal Teaching Hospital Libraries in North-West Nigeria.

Instruments for Data Collection

The instrument used for data collection in the present study was a structured, close-ended questionnaire developed by the researcher based on the research objectives, research questions and relevant literature reviewed. The questionnaire was considered appropriate because it enabled the collection of quantitative data from a relatively large number of respondents within a reasonable period and facilitated the systematic analysis of their responses. The questionnaire was titled Medical Textbooks, Current Awareness Services and Information Utilization among Medical Students in Federal Teaching Hospital Libraries in North-West Nigeria. It was divided into two sections, A and B. Section A contained five items designed to obtain demographic information from the respondents, namely gender, age, level of study, institution and frequency of library use. Section B consisted of thirty (30) close-ended items grouped into three clusters covering medical textbooks, Current Awareness Services (CAS) and information utilization.

Cluster One focused on medical textbooks and comprised ten items covering their availability and use for understanding medical concepts, academic learning, assignment preparation, research activities and examination preparation. Cluster Two addressed Current Awareness Services and comprised ten items covering journal alerts, current awareness bulletins, new arrivals notifications, email alerts and database alerts. Cluster Three measured information utilization and comprised ten items relating to the application of information obtained through medical textbooks and Current Awareness Services to academic learning, assignment preparation, research activities, presentations, examination preparation and clinical learning.

The items in Clusters One and Two were structured on a four-point Impact Scale comprising Very High Impact (VHI = 4 points), High Impact (HI = 3 points), Low Impact (LI = 2 points) and Very Low Impact (VLI = 1 point). Respondents were required to indicate the level of impact of medical textbooks and Current Awareness Services on information utilization.

Cluster Three, which measured information utilization, was also structured on a four-point Impact Scale comprising Very High Impact (VHI = 4 points), High Impact (HI = 3 points), Low Impact (LI = 2 points) and Very Low Impact (VLI = 1 point). Respondents were required to indicate the impact of information utilization in relation to academic learning, assignment preparation, research activities, presentations, examination preparation and clinical learning.

Validity of the Instrument

The instrument titled Medical Textbooks, Current Awareness Services and Information Utilization among Medical Students in Federal Teaching Hospital Libraries in North-West Nigeria was subjected to face and content validation by experts in Measurement and Evaluation and Library and Information Science to ascertain the appropriateness, clarity, relevance, adequacy and comprehensiveness of the items in measuring the variables under investigation.

The first validator was from the Department of Library and Information Science, Taraba State University, Jalingo. The validator carefully reviewed the instrument for face and content validity and assessed the relevance and adequacy of the questionnaire items. The validator recommended that the instrument should be aligned more closely with the specific objectives of the study, that the clusters should reflect medical textbooks, Current Awareness Services and information utilization and that the items should correspond directly with the research questions. The validator also recommended reviewing the response scales to ensure consistency with the impact of the variables being measured.

The second validator was also from the Department of Library and Information Science, Taraba State University, Jalingo. The validator examined the instrument in terms of content coverage, item relevance, clarity of expression and

appropriateness for the target respondents. The validator assessed whether the questionnaire adequately measured the major variables of the study and addressed the research questions. The validator further recommended adjustments to the wording of some items and the response formats to ensure consistency with the constructs of medical textbooks, Current Awareness Services and information utilization.

The third validator was from the Department of Guidance and Counselling, Test and Measurement Unit (T&M Unit), Federal University of Education, Zaria. The validator assessed the instrument for clarity, relevance, adequacy of coverage, appropriateness of language and suitability of the response scales. The validator examined the extent to which the items represented the constructs under investigation and aligned with the objectives, research questions and hypotheses of the study. The validator also recommended the use of appropriate response scales to improve measurement accuracy and consistency in assessing the impact of medical textbooks and Current Awareness Services on information utilization.

Based on the observations and recommendations of the validators, the instrument was revised accordingly. The comments relating to item clarity, alignment with the research objectives, organisation of clusters and suitability of response scales were incorporated into the final version of the questionnaire. Consequently, the instrument was considered to possess adequate face and content validity and was therefore deemed suitable for pilot testing and subsequent data collection.

Reliability of the Instrument

The reliability of the research instrument was established through a pilot study conducted at the Medical Library, Jos University Teaching Hospital (JUTH), Jos, Plateau State, North-Central Nigeria, outside the main study area to avoid response bias. The pilot study involved thirty (30) clinical medical students from JUTH, which was not included in the main study. Data obtained from the pilot study were analysed using Cronbach's Alpha reliability technique to determine the internal consistency of the questionnaire items across the various clusters. The analysis was conducted using the Statistical Package for the Social Sciences (SPSS), Version 28.

A reliability coefficient of 0.70 and above was adopted as the criterion for acceptable internal consistency. The instrument achieved an overall Cronbach's Alpha reliability coefficient of 0.910, indicating high internal consistency. The instrument was therefore considered reliable and suitable for data collection for the study on Current Awareness Services, Medical Mobile Applications and Information Utilization among Medical Students in Federal Teaching Hospital Libraries in North-West Nigeria.

Method of Data Collection

Prior to the commencement of data collection, ethical clearance was obtained from the relevant Research Ethics Committee of the participating teaching hospitals. Furthermore, the respondents were adequately informed about the purpose and objectives of the study, the nature of their participation and their right to participate voluntarily. Informed consent was obtained from each respondent before the administration of the questionnaire. The respondents were assured that participation was voluntary and that they could decline to participate or withdraw from the study without any penalty. They were also assured that all information provided would be treated with strict confidentiality and used solely for academic purposes.

To facilitate the administration and retrieval of the questionnaires, two trained research assistants were engaged from each participating teaching hospital. The research assistants were briefed by the researcher on the purpose of the study, the administration of the questionnaire, ethical considerations and procedures for retrieving the completed questionnaires. The questionnaires were administered physically to the selected clinical medical students by the researcher and the trained research assistants. Completed questionnaires were retrieved immediately after completion to minimize loss and improve the response rate. The data collection exercise was conducted over the period of four weeks. This procedure helps to ensure effective data collection, maximize the response rate, maintain proper coordination and facilitate the successful completion of the study.

Method of Data Analysis

The data collected for this study were analysed using both descriptive and inferential statistics. Data obtained from the completed questionnaires were coded and entered into the Statistical Package for the Social Sciences (SPSS), Version 28, for analysis. Research Questions one, and two were analysed using mean and standard deviation to determine the respondents' perceptions of the influence of Current Awareness Services and medical mobile applications on information utilization and the extent to which medical students utilized information obtained through these services and applications.

The decision rule for interpreting the mean scores was based on the four-point scales used in the questionnaire. The criterion mean was calculated as follows:

$$\bar{X} = \frac{\sum X}{N}$$

$$\bar{X} = \frac{4+3+2+1}{4}$$

$$\bar{X} = \frac{10}{4}$$

$$\bar{X} = 2.50$$

The interpretation of the mean scores was based on the

following decision rule:

1. Mean scores of 2.50 and above indicated a high level of impact or extent of information utilization.

2. Mean scores below 2.50 indicated a low level of impact or extent of information utilization.

Inferential statistics, specifically simple linear regression and multiple linear regression, were used to test the null hypotheses at the 0.05 level of significance. Simple linear regression was employed to determine the individual statistical contributions of Medical Text Books and Current Awareness Services to information utilization, while multiple linear regression was used to determine their joint statistical contribution. The null hypotheses were rejected where the probability value was less than 0.05 and retained where the probability value was equal to or greater than 0.05.

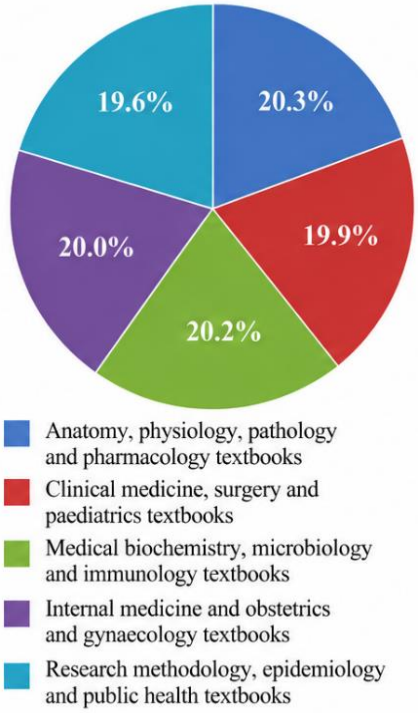
Presentation and Interpretation of Result

The following presentation and interpretation of Result as follows:

Research Questions

Research Question One: What is the impact of medical textbooks on information utilization among medical students in Federal Teaching Hospital Libraries in North-West Nigeria?

Figure 3.1
Impact of Medical Textbooks on Information Utilization among Medical Students (N = 240)



Item No.	Medical Textbooks	Frequency (f)	Percentage (%)
1.	Anatomy, physiology, pathology and pharmacology textbooks.	240	20.3
2.	Clinical medicine, surgery and paediatrics textbooks.	240	19.9
3.	Medical biochemistry, microbiology and immunology textbooks.	240	20.2
4.	Internal medicine and obstetrics and gynaecology textbooks.	240	20.0
5.	Research methodology, epidemiology and public health textbooks.	240	19.6
Total		**240**	**100.0**

The figure shows that medical textbooks such as anatomy, physiology, pathology and pharmacology textbooks accounted for the highest proportion (20.3%), followed by medical biochemistry, microbiology and immunology textbooks (20.2%). Internal medicine and obstetrics and gynaecology textbooks accounted for 20.0%, while clinical medicine, surgery and paediatrics textbooks accounted for 19.9%. Medical textbooks such as research methodology, epidemiology and public health textbooks had the lowest proportion (19.6%). Overall, medical textbooks were perceived to have a high impact on information utilization among medical students.

Source: Field Survey, 2026.

Table 3: Mean and Standard Deviation on the Impact of Medical Textbooks on Information Utilization among Medical Students

Item No.	Item Description	N	Mean	Std. Deviation	Remark
1.	Medical textbooks such as anatomy, physiology, pathology and pharmacology textbooks have an impact on my information utilization for academic activities.	240	2.80	0.755	High Impact
2.	Medical textbooks such as clinical medicine, surgery and paediatrics textbooks have an impact on my information utilization when preparing assignments.	240	2.75	0.768	High Impact
3.	Medical textbooks such as medical biochemistry, microbiology and immunology textbooks have an impact on my information utilization when preparing for examinations.	240	2.79	0.660	High Impact

4.	Medical textbooks such as internal medicine and obstetrics and gynaecology textbooks have an impact on my information utilization when studying diseases and their management.	240	2.76	0.753	High Impact
5.	Medical textbooks such as research methodology, epidemiology and public health textbooks have an impact on my information utilization when conducting research.	240	2.90	0.719	High Impact
	Grand Mean	**240**	**2.80**	**0.731**	**High Impact**

Source: Field Survey, 2026.

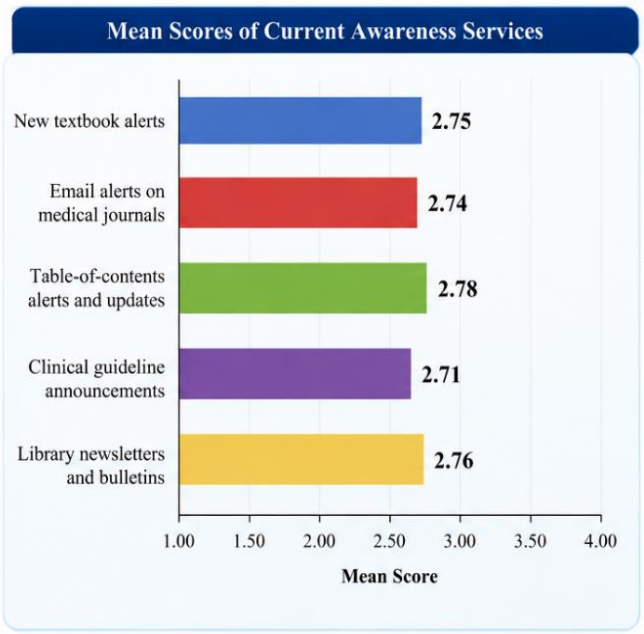
Table 3 shows a grand mean of 2.80, indicating that medical textbooks had a high perceived impact on information utilization among medical students in Federal Teaching Hospital Libraries in North-West Nigeria. The highest mean score was recorded for the use of research methodology, epidemiology and public health textbooks for conducting research (Mean = 2.90, SD = 0.719). This was followed by anatomy, physiology, pathology and pharmacology textbooks used for academic activities (Mean = 2.80, SD = 0.755).

The use of medical biochemistry, microbiology and immunology textbooks for examination preparation recorded a mean of 2.79 (SD = 0.660), while textbooks on internal medicine and obstetrics and gynaecology used for studying diseases and their management recorded a mean of 2.76 (SD = 0.753). The lowest mean score was recorded for clinical medicine, surgery and paediatrics textbooks used for assignment preparation (Mean = 2.75, SD = 0.768). Nevertheless, all five items recorded mean scores above the benchmark of 2.50, indicating high impact. Overall, the findings suggest that medical textbooks supported students' academic activities, examination preparation, research and understanding of diseases and their management.

Research Question Two: What is the impact of Current Awareness Services on information utilization among medical students in Federal Teaching Hospital Libraries in North-West Nigeria?

Figure 3.3

Impact of Current Awareness Services on Information Utilization among Medical Students (N = 240)



Item No.	Item Description	N	Mean	Std. Deviation	Remark
1.	Current Awareness Services such as alerts about newly acquired anatomy, physiology and pathology textbooks have an impact on my information utilization for academic activities.	240	2.75	0.706	High Impact
2.	Current Awareness Services such as email alerts about newly published articles in The Lancet, BMJ and other medical journals have an impact on my information utilization.	240	2.74	0.709	High Impact
3.	Current Awareness Services such as table-of-contents alerts, journal updates and new-publication notifications have an impact on my information utilization when keeping up with medical developments.	240	2.75	0.763	High Impact
4.	Current Awareness Services such as announcements of new clinical guidelines, treatment recommendations and disease reports have an impact on my information utilization during clinical learning.	240	2.71	0.741	High Impact
5.	Current Awareness Services such as library newsletters, email bulletins and subject-specific updates have an impact on my information utilization for research and assignments.	240	2.76	0.743	High Impact
	Grand Mean	**240**	**2.75**	**0.732**	**High Impact**

The figure shows that current awareness services had a high perceived impact on information utilization among medical students, with a grand mean of 2.75. The highest mean score was recorded for table-of-contents alerts, journal updates and new-publication notifications (M = 2.78), followed by library newsletters, email bulletins and subject-specific updates (M = 2.76). Alerts about newly acquired anatomy, physiology and pathology textbooks (M = 2.75), email alerts on newly published articles (M = 2.74), and announcements of new clinical guidelines and treatment recommendations (M = 2.71) also indicated a high impact.

Source: Field Survey, 2026.

Table 4: Mean and Standard Deviation on the Impact of Current Awareness Services on Information Utilization among Medical Students

Item No.	Item Description	N	Mean	Std. Deviation	Remark
1.	Current Awareness Services such as alerts about newly acquired anatomy, physiology and pathology textbooks have an impact on my information utilization for academic activities.	240	2.75	0.706	High Impact
2.	Current Awareness Services such as email alerts about newly published articles in The Lancet, BMJ and other medical journals have an impact on my information utilization.	240	2.74	0.709	High Impact
3.	Current Awareness Services such as table-of-contents alerts, journal updates and new-publication notifications have an impact on my information utilization when keeping up with medical developments.	240	2.78	0.763	High Impact
4.	Current Awareness Services such as announcements of new clinical guidelines, treatment recommendations and disease reports have an impact on my information utilization during clinical learning.	240	2.71	0.741	High Impact
5.	Current Awareness Services such as library newsletters, email bulletins and subject-specific updates have an impact on my information utilization for research and assignments.	240	2.76	0.743	High Impact
	Grand Mean	**240**	**2.75**	**0.732**	**High Impact**

Source: Field Survey, 2026.

Table 4 shows a grand mean of 2.75, indicating that Current Awareness Services had a high perceived impact on information utilization among medical students in Federal Teaching Hospital Libraries in North-West Nigeria. The highest mean score was recorded for table-of-contents alerts, journal updates and new-publication notifications used to keep up with medical developments (Mean = 2.78, SD = 0.763). This was followed by library newsletters, email bulletins and subject-specific updates used for research and assignments (Mean = 2.76, SD = 0.743).

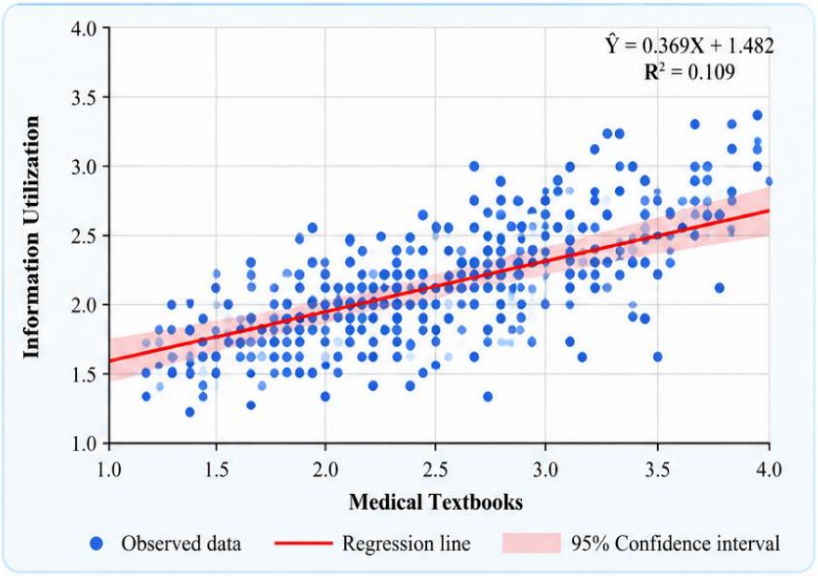
Alerts about newly acquired anatomy, physiology and pathology textbooks recorded a mean of 2.75 (SD = 0.706), while email alerts about newly published articles in The Lancet, BMJ and other medical journals recorded a mean of 2.74 (SD = 0.709). Announcements of new clinical guidelines, treatment recommendations and disease reports recorded the lowest mean score (Mean = 2.71, SD = 0.741). Nevertheless, all five items recorded mean scores above 2.50, indicating high impact. Overall, the findings suggest that Current Awareness Services helped students keep abreast of medical developments and identify information relevant to academic activities, research and clinical learning.

Hypotheses Testing

The null hypotheses were tested at the 0.05 level of significance using appropriate regression analyses to determine the individual and joint impact of the independent variables on the dependent variable.

Figure 5

Simple Linear Regression Analysis of the Impact of Medical Textbooks on Information Utilization (N = 240)



Model statistic	Result
Medical Textbooks → Information Utilization	
R	0.331
R^2	0.109
Adjusted R^2	0.106
F	29.214
df	1, 238
B	0.369
β	0.331
t	5.405
Sig.	0.001

The figure shows a positive linear relationship between medical textbooks and information utilization among medical students. The regression results indicate that medical textbooks significantly predicted information utilization, $F(1, 238) = 29.214$, $p = 0.001$, with a correlation coefficient of $R = 0.331$. The coefficient of determination ($R^2 = 0.109$) shows that medical textbooks accounted for 10.9% of the variation in information utilization. The positive regression coefficient ($B = 0.369$, $\beta = 0.331$) indicates that increased use of medical textbooks is associated with a corresponding increase in information utilization among medical students.

Source: Field Survey, 2026.

Table 5: Simple Linear Regression Analysis of the Impact of Medical Textbooks on Information Utilization

Model statistic	**Result**
Medical Textbooks → Information Utilization	
R	0.331
R^2	0.109
Adjusted R^2	0.106
F	29.214
df	1, 238
B	0.369
β	0.331
t	5.405
Sig.	0.001

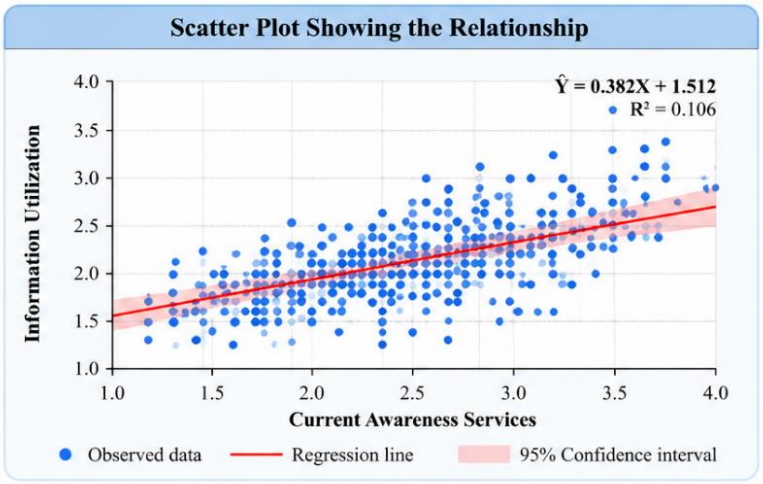
Source: *Field Survey, 2026.*

Interpretation: Medical textbooks had a statistically significant positive association with information utilization, \(R=0.331,\ R^2=0.109,\ F(1,238)=29.214,\ p<0.001\). Medical textbooks accounted for approximately 10.9% of the variance in information utilization. The regression coefficient was positive (\(B=0.369,\ \beta=0.331\)), indicating that higher textbook scores were associated with higher information-utilization scores.

Decision on H_{01}: Reject the null hypothesis.

Figure 6

Simple Linear Regression Analysis of the Impact of Current Awareness Services on Information Utilization (N = 240)



Model statistic	Result
Current Awareness Services → Information Utilization	
R	0.325
R^2	0.106
Adjusted R^2	0.102
F	28.195
df	1, 238
B	0.382
β	0.325
t	5.310
Sig.	0.001

Interpretation

The figure shows a positive linear relationship between current awareness services and information utilization among medical students. The regression results indicate that current awareness services had a statistically significant positive association with information utilization, **R = 0.325**, $R^2 = 0.106$, $F(1, 238) = 28.195$, $p < 0.001$. Current awareness services accounted for approximately 10.6% of the variance in information utilization. The positive regression coefficient (B = 0.382, β = 0.325) indicates that higher current awareness service scores were associated with higher information-utilization scores.

Decision on H_{02}

The null hypothesis (H_{02}), which states that current awareness services have no significant impact on information utilization among medical students, is rejected at the 0.05 level of significance.

Source: Field Survey, 2026.

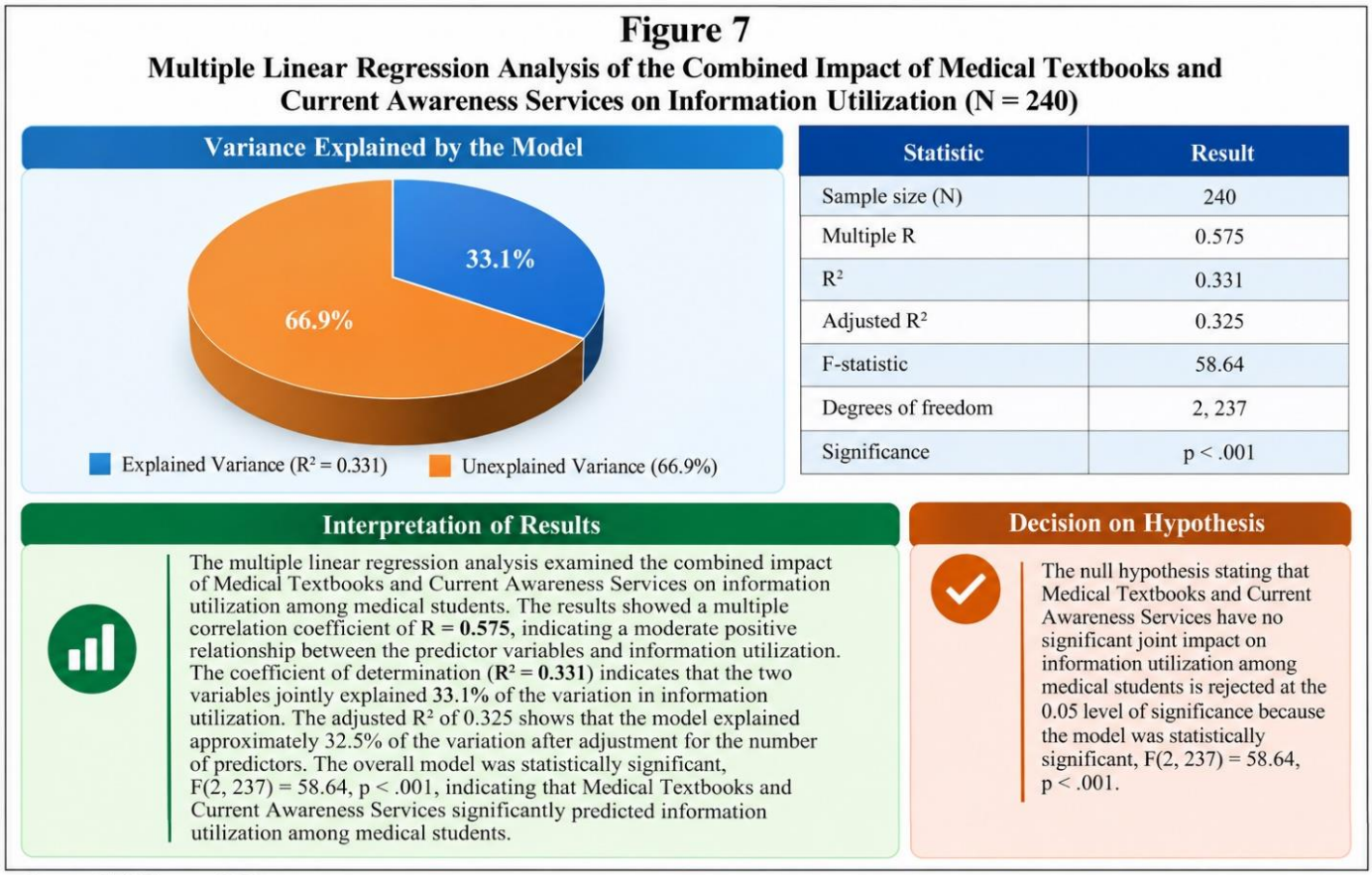
Table 6: Simple Linear Regression Analysis of the Impact of Current Awareness Services on Information Utilization

Model statistic	Result
Current Awareness Services → Information Utilization	
R	0.325
R^2	0.106
Adjusted R^2	0.102
F	28.195
df	1, 238
B	0.382
β	0.325
t	5.310
Sig.	0.001

Source: *Field Survey, 2026.*

Interpretation: Electronic journals had a statistically significant positive association with information utilization, \(R=0.325,\ R^2=0.106,\ F(1,238)=28.195,\ p<0.001\). Electronic journals accounted for approximately 10.6% of the variance in information utilization. The positive regression coefficient (\(B=0.382,\ \beta=0.325\)) indicates that higher electronic-journal scores were associated with higher information-utilization scores.

Decision on H_{02}: Reject the null hypothesis.



Source: Field Survey, 2026.

Table 7: Multiple Linear Regression Analysis of the Combined Impact of Medical Textbooks and Current Awareness Services on Information Utilization

Statistic	Result
Sample size (N)	240
Multiple R	0.575
R^2	0.331
Adjusted R^2	0.325
F-statistic	58.64
Degrees of freedom	2, 237
Significance	p < .001

Source: *Field Survey, 2026.*

The multiple linear regression analysis examined the combined impact of Medical Textbooks and Current Awareness Services (CAS) on information utilization among medical students in Federal Teaching Hospital Libraries in North-West Nigeria. The analysis involved 240 respondents and produced a multiple correlation coefficient (R) of 0.575, indicating a moderate positive relationship between the predictor variables collectively and information utilization.

The coefficient of determination ((R^2 = 0.331)) indicates that Medical Textbooks and Current Awareness Services jointly explained 33.1% of the variation in information utilization. The adjusted R^2 of 0.325 indicates that the model explained approximately 32.5% of the variation after adjustment for the number of predictors included. The remaining 66.9% of the variation may be associated with other factors not included in the model and unexplained variation.

The overall regression model was statistically significant, (F(2,237) = 58.64,\ p < .001). This indicates that Medical Textbooks and Current Awareness Services, considered jointly, significantly predicted information utilization. Therefore, the null hypothesis stating that Current Awareness Services and medical mobile applications have no significant joint influence on information utilization is rejected at the 0.05 level of significance.

Discussion of Findings

This section discusses the findings of the study in relation to the research questions, relevant empirical studies and Wilson's Information Behaviour Model (1999).

Impact of Medical Textbooks on Information Utilization among Medical Students

The findings revealed that medical textbooks had a high perceived impact on information utilization among medical students in Federal Teaching Hospital Libraries in North-West Nigeria, with a grand mean of 2.80 and a standard deviation of 0.731. All five items recorded mean scores above the benchmark of 2.50, suggesting that medical textbooks contributed to students' academic learning, assignment preparation, examination preparation, research activities and understanding of diseases and their management. The highest mean score was recorded for research methodology, epidemiology and public health textbooks used for conducting research (Mean = 2.90, SD = 0.719), while clinical medicine, surgery and paediatrics textbooks used for assignment preparation recorded the lowest mean score (Mean = 2.75, SD = 0.768). Although the scores varied slightly, the results indicate that students perceived textbooks as useful across several academic activities.

The prominence of research methodology, epidemiology and public health textbooks suggests that students particularly valued textbooks that helped them understand research procedures, interpret health-related information and develop knowledge for research activities. This may be because such textbooks provide systematically organised explanations of research concepts and methods that students can consult repeatedly while planning and conducting academic work. The finding is consistent with the study by Ranabhat et al. (2024), which examined learning-resource use among medical students and reported that students who used textbooks had higher mean examination scores than non-users in the study setting. This provides related evidence that textbooks can contribute to medical students' learning. However, examination performance is not identical to information utilization, and the relationship reported by Ranabhat et al. should be interpreted as supporting evidence rather than direct proof of the impact found in the present study.

The finding also suggests that textbooks remain relevant despite the increasing availability of digital information resources. Their structured presentation of medical concepts can help students establish foundational knowledge before consulting more specialised or recently published materials. In particular, textbooks on anatomy, physiology, pathology and pharmacology may support the understanding of basic medical principles, while clinical medicine, surgery and paediatrics textbooks may help students develop knowledge relevant to clinical subjects. Nevertheless, the comparatively lower mean for assignment preparation does not necessarily mean that textbooks were unimportant for assignments. It may indicate that students also rely on journal articles, electronic databases and other resources when completing assignments that require recent research evidence.

The finding can further be explained through Wilson's Information Behaviour Model (1999). The model proposes that information needs motivate individuals to engage in information-seeking behaviour, while personal and environmental factors may facilitate or constrain the process. In the context of this study, medical students' needs to understand medical concepts, prepare for examinations and conduct research may motivate them to consult textbooks. The perceived impact reported by respondents reflects the extent to which they consider these resources useful in meeting their academic information needs. However, the model also implies that the availability of textbooks alone does not guarantee their effective use, since access, relevance and students' ability to locate and apply information may influence the outcome.

Overall, the finding indicates that medical textbooks were perceived as an important source of information for medical students in the selected Federal Teaching Hospital Libraries in North-West Nigeria. The result supports the continued provision of relevant and up-to-date medical textbooks in both print and electronic formats. However, because the table reports descriptive statistics based on students' perceptions, the grand mean of 2.80 should be interpreted as evidence of high perceived impact, rather than conclusive statistical evidence that textbooks independently caused improvements in information utilization.

Impact of Current Awareness Services on Information Utilization among Medical Students

The findings revealed that Current Awareness Services had a high perceived impact on information utilization among medical students in Federal Teaching Hospital Libraries in North-West Nigeria, with a grand mean of 2.75 and a standard deviation of 0.732. All five items recorded mean scores above the benchmark of 2.50. Table-of-contents alerts, journal updates and new-publication notifications recorded the highest mean score (Mean = 2.78, SD = 0.763), suggesting that students particularly valued services that helped them identify recent medical literature and remain informed about developments in their field.

This finding is supported by Creazzo and Norman (2022), who described the Hot Topics current awareness service in hospital libraries. Their study showed how a structured service could promote research engagement, improve awareness of library resources and support evidence-based practice. These functions are relevant to medical students who need to identify appropriate literature for assignments, research and clinical learning. Their later study also

reported positive participant feedback regarding the service's contribution to education, professional development and evidence-based practice (Creazzo & Norman, 2026). Although these studies were conducted in hospital-library settings rather than among medical students in North-West Nigeria, they provide relevant evidence of the potential educational and research value of CAS.

The finding is also consistent with Saliu et al. (2024), who examined medical students' satisfaction with reference services at Afe Babalola University in Nigeria. Their study identified CAS and selective dissemination of information among the reference services used daily and reported that library services helped users locate relevant resources and supported research and learning. This Nigerian evidence reinforces the relevance of current awareness activities within medical-library services. Nevertheless, because Saliu et al. examined service use and satisfaction, their results should not be interpreted as direct proof of a significant impact on information utilization.

The comparatively lower mean score for announcements about new clinical guidelines, treatment recommendations and disease reports (Mean = 2.71, SD = 0.741) may indicate that CAS relating to clinical developments is less useful to some respondents or that students have different levels of awareness of such updates. The descriptive findings alone cannot establish the reason for this difference. Medical libraries could therefore assess students' information needs and provide more targeted alerts on clinical guidelines, disease reports and recent research relevant to their courses and clinical placements.

The findings can also be explained through Wilson's Information Behaviour Model (1999), which recognises that information needs motivate information-seeking behaviour and that personal and environmental factors can influence the process. CAS may help medical students respond to their information needs by notifying them of newly published literature and relevant developments. However, receiving an alert does not necessarily mean that the information has been accessed or applied. Its contribution to information utilization depends on whether students recognise the relevance of the information, can access the resource and use it for their academic or clinical learning activities.

Overall, the findings suggest that CAS was perceived as a useful means of helping medical students discover relevant information and keep abreast of medical developments. The findings support strengthening journal alerts, new-publication notifications, library bulletins and subject-specific updates in Federal Teaching Hospital Libraries in North-West Nigeria. Since the present results are descriptive, further inferential analysis would be needed to determine whether CAS has a statistically significant impact on information utilization.

Conclusion

The study concludes that medical textbooks and Current Awareness Services (CAS) had a high perceived impact on information utilization among medical students in Federal Teaching Hospital Libraries in North-West Nigeria. Medical textbooks were particularly valued for research activities, academic learning and examination preparation, while CAS helped students identify new publications and keep abreast of medical developments. These findings suggest that both information resources and library services play important roles in supporting medical students' academic and clinical learning. In line with Wilson's Information Behaviour Model (1999), the effective utilization of these resources depends on students' information needs, their ability to identify relevant materials and their access to appropriate information services. Therefore, Federal Teaching Hospital Libraries should strengthen the availability of relevant medical textbooks and improve the accessibility, awareness and relevance of CAS to support students' information needs.

Recommendations

Based on the ten findings of the study, the following recommendations were made:

1. Federal Teaching Hospital Libraries should acquire adequate and up-to-date medical textbooks, particularly in clinical medicine, surgery, paediatrics, research methodology, epidemiology and public health, to support students' academic and clinical learning activities.
2. Federal Teaching Hospital Libraries should strengthen Current Awareness Services through journal alerts, notifications of new publications and updates on relevant clinical guidelines to keep medical students informed about current developments in medicine.

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