

Medical Professionals' Information Identification Skill Associated with Patients Health Records Utilization among Tertiary Health Institutions in South- South, Nigeria

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Abstract

Information literacy skill is an aspect of information literacy that has been seen as a process of gaining the abilities that helps in the establishment of an information literate person. The study investigated medical professionals' information identification skills and utilization of patients' health records in tertiary health institutions in South-South, Nigeria. It employed the correlational research design, with a population of 8993 medical professionals. A sample size of 386 using the Krejcie and Morgan table and sampled using simple random sampling technique. A face validated instrument named 'Medical Professionals' Information Identification Skills and Patients Health Records Utilization Questionnaire (MPIISPHRUQ) was used for data collection. Simple regression was used in answering research questions.

Result: The result showed that there is significant difference in the utilization of patient health records and medical professional information literacy skills. Also, it was found that medical doctors, health information personnels, nurses and pharmacists do significantly use information literacy skills to a very great extent in the tertiary health institutions. The study concluded that information identification skills significantly influence the utilization of patients' health records by medical professionals of tertiary health institutions. This has demonstrated the relevance of information literacy skills in the health sector especially the tertiary health institutions. With this, the possibility of medical professionals to the utilization of patients' health records that would enhance their research success is possible and can be reality in south- South of Nigeria.

Conclusion: Based on this conclusion, the following recommendation was made: those tertiary health institutions should incorporate information literacy skills in the health sector especially teaching hospitals so that they can use patient health records properly.

Keywords: Medical Professionals, Information Literacy Skills, Patients Health Records, Tertiary Health Institutions, South- South Nigeria.

Introduction:

The growth and development of every health organization is to attain a level of effectiveness in the system especially health institutions that take care of patients, as a result, there must be a level of medical information availability at its disposal and management that aimed at achieving

its stated goals and objectives effectively and efficiently must have at the back of its mind, necessary human resources skills, strategies as well as techniques of individuals ability to man that institution. Health professionals in their various capacities need to make sure that health facility need to be developed with different skills that will make the healthcare system move speedily with appropriate human and capital infrastructure that would enhance accuracy, timeliness and effectiveness of patient information in the propagation of healthcare system in the nation

The invaluable nature of the healthcare delivery system of a nation must be integrated and patient health records should be available for use in the hospital (Ojo and Popoola, 2015). This is because efficient collection, storage, and utilization of medical data are essential components in clinical and public health decision-making processes. On the contrary, physicians note still commit various errors during recording of medical data or fail to record healthcare data on time. Errors that emanate from poor medical data recording are both common and expensive (Adane *et al.*, 2019). This is to say individuals in our global, information-rich environment are faced with increasingly diverse and abundant information choices. However, majority of medical professionals in Nigeria search for sources in the patient health information almost on daily basis but they lack required information literacy skills (Okpala *et al.*, 2017). This has become a problem in most health institutions in Nigeria and the world at large because these health professionals are not being exposed to the required information literacy skills which they require for their day-to-day lives as health practitioners who can use patient health records for research, planning hospital equipments, statistical purposes, scholarship work and decision making in the healthcare system (Adeloye *et al.*, 2017).

According to Musediq *et al.* (2021), information literacy involves recognizing the need for information, finding information effectively, evaluating information, managing information, and constructing new concepts for medical, cultural, social, and ethical use of information. That is why the national healthcare delivery framework depends mostly on the capacity of the hospitals to render qualitative and affordable healthcare to its citizenry. Also, Okpala *et al.*, in Bothma, *et al.* (2014) described information literacy as 'the ability to find (identify), retrieve, analyze and use information. The focus of this study is on information identification skills.

Information identification skills

Purpose of the Study:

The purpose of this study was to determine the extent to which medical professionals' information identification skills relate patients' health records utilization among tertiary health institutions in south-south Nigeria.

Research Questions:

To what extent does medical professionals' information identification skills relate with patients' health records utilization in tertiary health institutions in south-south Nigeria?

Hypothesis

Medical professionals' information identification skills do not significantly relate with patients' health records utilization in tertiary health institutions in south-south Nigeria

Methodology

The design for the study was correlational research design. The population of the study was 8993 medical professionals (health information personnel, Medical Doctors, Nurses and Pharmacists). A sample size of 386 established using the Krejcie and Morgan sample size table and sampled using simple random sampling technique. A face validated instrument named 'Medical Professionals' Information Identification Skills and Patients Health Records Utilization Questionnaire (MPIISPHRUQ) was used for data collection Simple regression was used in answering research questions and test the hypothesis at .05 level of significance.

Literature Review

Information literacy is the term being applied to the skills of information problem solving (American Library Association, 2000). Transforming information into knowledge requires information literacy skills. As stated in the UNESCO's World Report "Towards Knowledge Societies" (UNESCO, 2005), information without transformation is only raw data. The use of information requires a mastery of cognitive 36 skills, including critical thinking. This, in turn depends upon the capacity to locate, evaluate and use information. Bawden and Nisen (2001) assert that information literacy skills can be conceived as a continuous learning process that encompasses abilities and knowledge, plus the notion of values, with emphasis on several other terms. Different of terms have been used by different authors for information literacy skills. They include: 'info-literacy', 'informacy', 'information empowerment', 'information competency', 'information literacy skills', 'information literacy and skills', 'skills of information literacy', 'information literacy competency', 'information handling skills', 'information problem solving', 'information problem-solving skills', and 'information fluency'. Lau, 2006 observes that there are two ways to look at information literacy skills in any learning environment. The first part relates to study skills which students, researchers, academics and other information users will need to put to use during their study or research. These include being able to use a library and its resources for advancing one's studies or research, being able to perform literature searches to whatever depth and complexity required for a particular research or discipline area, and being able to demonstrate this to the satisfactory point in whatever form necessary by means of citations and references to reading and information gathering. This approach supports the idea of a competent user, one who is able to function effectively as part of the academic community.

The aspect of medical professionals making use of information literacy skills in their place of work should be synonymous to identify a lack of knowledge in a subject area in their organization, it is also important to identify a search topic / question and define it using simple terminology in the health environment where patient health records are vital for research purposes, in other words articulate current knowledge on a topic related to their specialty. Medical practitioners should also endeavor to recognize a need for information and data to achieve a specific end and define limits to the information need and use background information to underpin the search in the health environment, therefore they should take personal responsibility for an information search and manage time effectively to complete a search in their field of study.

According to Musa el at, (2019) cited Bitagi (2012), utilization of information is the extent to which available information resources is used to meet the information needs of the users especially medical professionals. This implies that it is incumbent on medical practitioners to make maximum use of the available information resources to ease the performance of their

respective duties as prescribed and arranged. If this is achieved it is expected that the medical practitioners will provide sufficient and reliable medical services to all the citizens of the state. However, the health information in their different forms and sources need to be found in order for use to be effective. Recent studies in information sciences have been concerned with the manner in which information sought is used. Cox and Jantti (2012) maintained that usability studies are concerned with discovering, articulating, understanding, influencing and when appropriate the elimination or at least minimization of those obstacles between a user and his information goals. Studies by Eison, (2010) which explored the use of information, found out difference in the use of patient information, sources and types exist among professionals.

According to Idiodi (2005), information literacy skills acquisition is an aspect of information literacy and may be seen as the process of gaining the tools that assist the development of information literacy in an individual. Information literacy implies the intellectual capabilities involved in using information, as distinct from the technical know-how required for using information technologies that hold or deliver data. This latter ability can be characterized as information technology literacy. Hargittai (2002), in his study of online skills defines skill as the ability to complete a task and the amount of time spent for completing it. Medical professionals with low information literacy skill may spend too much time retrieving information owing to problems they may encounter when seeking information especially in electronic information resources. Therefore health and medical professionals should scope their search question clearly and in appropriate language in their different of study, define a search strategy by using appropriate keywords and concepts in the health sector, also defining and setting limits in the hospital which will in turn help them in scholarly work to enable health professionals select the most appropriate search tools and identify controlled vocabularies and taxonomies to aid in searching appropriate tools and techniques which will identify specialist search tools appropriate to each individual information need in their place of work.

For medical professionals to retrieve information in the open web, not only formal information skills are needed but substantial information skills (Grigore et al, 2009) who observed that sophisticated computer skills do not automatically translate into skills in search and retrieving of information (Ergart,2002). However, some studies, for example, Kinengyere (2007), found out that available information is not necessarily accessed and used by users. The study shows that the availability of information does not necessarily mean actual use because the users may not be aware of the availability of such resources, they do not know how to access these resources, or do not know what the resources offer in the health environment.

Results and Discussion

To what extent do medical professionals' information identification skills relate with patient health records utilization in tertiary health institutions in south-south Nigeria?

Table 1: Summary of Simple Regression on the Relationship between Medical Professionals' Information Identification Skills and Patient Health Records Utilization among Tertiary Health Institutions in South-South Nigeria

| <i>R</i> | <i>N</i> | <i>R</i> ² | <i>Adj. R</i> ² | <i>SE of Estimate</i> |
|----------|----------|-----------------------|----------------------------|-----------------------|
| .377 | 368 | .014 | .014 | 5.750 |

Key: *R* = Regression coefficient, *R*² = Coefficient of determination, *Adj.R*² = adjusted Coefficient of determination, *SE* = standard error and *N* = sample size.

Results from Table 1 shows that the effect of medical professionals' information identification skills on patient health records utilization yielded a regression coefficient value (*R*) of 0.377. It also yielded a coefficient of determination (*R*²) and adjusted coefficient of determination (*Adj. R*²) of 0.014, respectively. This value of the adjusted coefficient of determination implies that 1.4% changes in patient health record utilization are dependent on the effect of medical professionals' information identification skills, whereas 99.6% of changes are accounted for by other factors.

Table 2: Summary of Analysis of Variance Associated with the Relationship between Medical Professionals' Information Identification Skill and Patient Health Records Utilization among Tertiary Health Institutions in south-south Nigeria

| Source of Variance | Sum Squares | Df | Mean Square | F | p-value |
|--------------------|-------------|-----|-------------|--------|---------|
| Regression | 2002.379 | 1 | 2002.379 | | |
| Residual | 12099.523 | 366 | 33.059 | 60.570 | .000*** |
| Total | 14101.686 | 367 | | | |

Key: Df =degree of freedom, F = ANOVA F-statistic, p-value = error probability at .05 margin, * = Significant at *p* < .001**

To verify the extent of significance of the relationship between medical professional's information identification skill and patient health records utilization, the scores of medical professionals' identification skill was subjected to analysis of variance. The results obtained are displayed in Table 2.

Results from Table 2 showed that the calculated F-value of 60.570 was obtained at 1 and 366 degrees of freedom, and at 0.00 level of significance. Therefore, since the obtained level of probability (*p* = 0.000) is less than the chosen level of probability (*p* = 0.05), the null hypothesis was rejected it implies that there is significant influence of medical professionals' information identification skills on patient health records utilization in tertiary health institutions in south-south Nigeria.

Discussion:

Results from Table 1. shows that the effect of medical professionals' information identification skills on patient health records utilization yielded a regression coefficient value (*R*) of 0.377. It also yielded a coefficient of determination (*R*²) and adjusted coefficient of determination (*Adj. R*²) of 0.014, respectively. This value of the adjusted coefficient of determination implies that

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The result revealed that the finding could be ascribed to the fact that information identification skills can help medical professionals report lack of knowledge in a subject, use simple terminology to identify a research topic or question, articulate current knowledge on a topic, establish the limit to information search requirement, recognize an information need to achieve a specific end, use background knowledge of patient records to underpin the search, take responsibility for information search, locate information from different sources, retrieve information in different formats and identify the authority of search inputs in publish and unpublished information sources. This fact is supported by Baro (2010) who stated that students ill-equipped with information identification skills, a key aspect of information literacy skill, suffered under-utilization of existing information and communications technologies and information resources. Another relevance of this finding is seen in the fact that medical practice students are exposed to information literacy development programs by requiring them to update their information permanently for evidence-based medicine. This awareness of information literacy skills in leaps and bounds has invariable helped in solving lots of medical education problems (Baro *et al.*, 2011). According to Grewalet *et al.* (2016), using simple terminology to identify a research topic or question increases the chances of retrieving information from a search. This finding is corroborated by Grewalet *et al.* (2016), who showed that literature search is vital to identifying appropriate methodology, designing of the study, designing of sampled population and sampling methods, and methods of measuring concepts and techniques of analysis. They also showed that applying appropriate approaches to information searching also helps in ruling out irrelevant variables affecting the outcome and identifying avoidable errors. For instance, Copypress (2022) stated that some of the disadvantages of using jargon are the prevention of meaningful connection, and the hindrance of search traffic, making the process difficult.

Rahoo *et al.* (2019) corroborated the relevance of using information retrieval tools (IRTs) in their study among post-graduate students of higher educational institutes in Pakistan. They revealed that the use of IRTs impacted positively on the social and academic life, and also enhanced the global knowledge of the students on different issues. A study carried out by Illogho and Nkiko (2014) in Ogun State, revealed that preponderance of respondents from five private universities had low level of information literacy and search skills, which was a setback to information literacy utilization, and resulted in a huge waste of intellectual development and academic performance.

Conclusion:

Based on the conclusion of the study, the following recommendations were made: Tertiary health institutions should provide a rich promotional campaign activity by incorporating information identification skills in the hospitals to enhance the utilization of patient health records for easy research and publication. Hospitals and medical professionals should urgently make proposal to

parent institutions for fund that would enable the hospitals use appropriate writing styles in a variety of formats, select appropriate publications and dissemination outlets in which to publish, and develop a personal profile in scholarly community using appropriate personal networks in digital technologies. Tertiary health institutions should embrace the use of information management skills so that it will be easy to retrieve information in different formats, uses background information to underpin the search, and articulation of current knowledge in a topic concerning health issues in the hospital.

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