

# Acceptance and Rejection of Internet for Health Information Among Private Health Professionals in a Nigerian City

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## Abstract

Internet is one technology that has permeated every sphere of human endeavour, including communication, science and technology, telecommunication, education and health among others. However, no matter how useful, fantastic, appealing and gratifying a technology is, not everyone accepts it. The study evaluates how medical professionals in private hospitals in Anyigba, Kogi State, Nigeria integrate the use of Internet into their professional practice. Conducted within the framework of Technology Acceptance Model (TAM), the study employed both quantitative and qualitative methods, using questionnaire and interview schedule respectively to identify factors that precipitate both acceptance and rejection of Internet. The study found that 53% of medical professionals in Anyigba prefer Internet sources as against 20% and 17% who prefer journal/books and professional colleagues respectively. The study also found that health professionals use the Internet mainly to get professional updates (Mean =4.02, Stand Deviation = 1.58, Variance = 2.51), communicate with patients (Mean = 3.94, Standard Deviation = 1.55, Variance = 2.41). Others notable uses identified are for drugs/medication (Mean = 3.77, Standard Deviation = 1.39, Variance = 1.94), monitor trends of diseases (Mean = 3.58, Standard Deviation = 1.75, Variance = 3.05) among other uses. Cost, relevance of information to professional practice, skills on how to use the technology and how readily accessible are the sources, are factors that influence acceptance and/or rejection of a possible information source. The study recommends that health professionals should promote capacity building for both younger and older practitioners on how best to employ Internet-based applications for medical practice.

**Keywords:** Health communication, Internet, Technology Acceptance Model, Nigerian City, Private Hospital

## 1. Introduction

Technology has become part and parcel of human existence. However, whenever new technology emerges, while there are people who accept it, integrate it into their day-to-day lives, others out rightly abstain from using it, no matter how useful, fantastic, appealing, and gratifying the technology is. Human beings express their love or hatred towards technology by either rejecting or accepting it. Acceptance or rejection or both have therefore become ways of understanding the relationship between man and technology.

Internet is one technology that has permeated every sphere of human endeavour, ranging from communication, science and technology, telecommunication, education, health, among others. This historic influence of Internet on virtually every field of endeavour is as result of its far-reaching communication system (Oladude, 2007). The amount of online resources is constantly growing (Thanuskodi, 2010) and this implies that there is an exponential growth of influence of Internet on professionals from all spheres of life, including healthcare professionals. Emmanuel (2014) describes the Internet as “one of the most versatile technologies in human history” (p.1) and this versatility indicates that it is relevant to virtually all aspects of human life, including health.

Gatero (2010) insists that access to relevant information is essential to effective healthcare delivery and this information can be accessed from anywhere and at anytime (Jadoon et al., 2011). Internet affords health

related matters and collaborate in handling health-related challenges (Manhas, 2008). It also helps to bridge the information gap between developing countries and developed countries (Anyaku, Nwafor-Orizu & Oguaka, 2015). Through its numerous vast resources, “the Internet provides a pool of opportunities to individuals, groups, organisations and institutions” (Emmanuel, 2014, p.1).

Thanuskodi (2010) identifies the following commonly used Internet modalities: e-mail, World Wide Web, News group, real time chat, File Transfer Protocol, Gopher and remote computing applications such as Telnet. For healthcare professionals, Internet provides access to medical records and health care literature; it also provides distant patient care through telemedicine facilities (Thanuskodi, 2010). Internet is an essential source of information for both health professionals (Ajuwon, 2015) and healthcare consumers (Gibbons, 2011). As a matter of fact, healthcare consumers rely more on the Internet than their healthcare providers (Kind, Huan, Farr & Pomerantz, 2005). Internet also helps health practitioners to gather information, track and monitor trends of diseases (Centre for Disease Control, 2003).

Some scholars measure the impact of Internet on the society from the perspective of power interplay that underpins the modern society. In the health circles for instance, the Internet has redefined the power relations between healthcare providers and healthcare consumers as the latter are now more empowered to take responsibility of their own health choices (Laing et al., 2010). Put more aptly, “internet has been both an enabling tool, allowing assertive consumers via access to unprecedented informational resources to find their voice, and a driver of change in its own right by creating new capabilities and new mindsets among consumers” (Laing, et al, 2010, p.10).

Castells (2004, p.8) asserts that Internet technology has helped in “the augmentation of the human capacity” by serving as auxiliary memory to the human brain. This special function of the Internet can also help to consolidate the knowledge-based economy where information is sold, bought, owned and shared. This has placed both the producer and consumer of information on equal ground in the production process. Unlike in the past where access, production and dissemination of information are exclusive of professionals, the emergence of Internet technology has liberalised the communication industry, as the producer and consumer of knowledge assume a mutually, but interdependent relationship in information production process. This has further diminished the line of demarcation between the producer and consumer of information, as both are engaged in the production process. In other words, Internet has challenged and destroyed the established informational monopolies that were hitherto enjoyed by few but powerful professionals, organisations and government (Laing, et al, 2010). David (2001) captures how Internet has broken the monopoly of information thus:

One of the main forces within the e-environment is consumer empowerment. With greater access to more readily available sources of information than their forefathers, consumers are assuming an increasingly active role. [...] Instead of being passive recipients of judgements and treatments handed out by the medical community, consumers will be actively involved in managing their own healthcare. They will demand a better quality of life, better care, personalized treatment, convenience, choice, and value for money (Laing et al., 2010, p.14).

From the existing literature on the use of Internet for health purposes in Nigeria, it appears like there are greater emphases on factors responsible for acceptance of Internet technology than factors responsible for Internet rejection. For instance, in Nigeria, there are studies on how medical professionals in public hospitals make use of the Internet to quench their thirst for health-related information. These studies focused on the use of online health resources by medical doctors in training within tertiary institution in South-West Nigeria (Ajuwon, 2015); the use of computer and internet among tertiary healthcare providers and trainees in public hospital (Adeleke, Asiru, Oweghoro, Jimoh & Ndana, 2015); the use of Internet by medical students in Nnamdi Azikwe University, Awka (Anyaku, Nwafor-Orizu & Oguaka, 2015) and ICT knowledge and utilisations by health professionals in the National Hospital, Abuja (Adeleke, et al., 2015).

Some scholars argue that to understand the implementation of information technology policies, efforts should be made to situate it in the workplace rather than in the laboratory (Ketikidis, Dimitrovski, Bath, & Lazarus, 2011). Efforts should also be made to understand why some people still reject a given technology, no matter how appealing. Berg (2001, pp.143-144) capture it more aptly:

The implementation of comprehensive information systems in health care practices has proved to be a path ridden with risks and dangers. It has become evident that there are many more failure stories to tell than there are success stories – and the more comprehensive the technology, or the wider the span of the implementation, the more difficult it appears to achieve success [...] whether an information system is ‘successful’ or not is decided on the workflow (Berg, 2001, pp. 143-144).

The relationship between human beings and technology has been well-documented in terms of the functional acceptance of the technology, users’ perception of the technology and the symbiotic relationship between technology and humanity, otherwise known as technosymbiosis (Brangier & Hammes-Adele, 2011). While there are different documented studies that support the acceptance of technology (See Venkatesh & Balla, 2008; Venkatesh, Bettany-Saltikov & Warren, 2000; Venkatesh & Davis, 2000; Davis, 1989), there are sparse researches on technology rejection (Sudhir & Monto, n.d).

Not all aspects of a given technology have a uniform appeal to the user. For instance, while an individual may make use of Internet for social activities, the same person may forbid using the same technology for health information purpose. Therefore a study on technology acceptance may not give birth to the intrinsic understanding of technology rejection (Sudhir & Monto, n.d). The current study is therefore different from earlier studies as it focused on the use (acceptance) and rejection of Internet by medical professionals in private hospitals. Publicly owned hospitals in Nigeria have been under serious criticism because of the poor quality services they render as a result of lack of motivation of personnel. Hence, for those who are not satisfied with the services of public hospitals, private hospitals become good alternatives. In a study on the attitude of women towards private and public hospitals for obstetric care, it was found that majority of participants (79.4 per cent) would prefer to be delivered in private hospitals while 14.1 per cent would prefer to deliver in public hospitals

(Nwosu, Ugboaja, Obi-Nwosu & Igwegbe, 2012). This figure indicates that private hospital play essential role in healthcare administration in Nigeria. In Anyigba, Kogi state (the study area) for instance, Diagnostic Hospital, which is owned by the state government, is the only visible government-owned health center in the city, as most resident depend on private hospitals for their health services.

## 2. Literature Review

In their studies of health workers access to continuous professional education in Malawi, it was found that healthcare professionals used clinical handover meetings, seminar and workshop materials as sources of information (Adamson, Muula & Minin (2003). Anyaoku et al., (2015) evaluated the use of Internet by medical students in Nnamdi Azikiwe University, Awka, Nigeria and found that Internet was majorly used to search for medical information and for social communication. The study identifies low use of online resources to search vital for vital information. In the study on access and utilisation of Information and Communication Technologies (ICTs) by medical professionals in Kenyatta National Hospital, Gatero (2010) found that medical professional actually need medical information in the discharge of their responsibilities. In their quest for vital medical information, the study further states that medical professionals turned to colleagues, journals and substantially, they have preference for electronic resources. The study also identifies inadequate library and information services, inadequate access to the electronic resources and poor ICT skills to be major barriers to access to medical information. In their study on Internet access and utilization by medical students in Lahore, Pakistan; Jadoon et al. (2011) found that the students use Internet for both professional and academic purposes.

There are also studies on the use of Internet by patients for health information. In a study on helping patients to access high quality health information, it was found that healthcare consumers are increasingly turning to the Internet for various forms of medical information (Shepperd, Charnock & Gann, 1999). But Josefsson & Hanseth (2000) and Pereira & Bruera (1998) caution that the information on the Internet can be highly misleading and can be of low quality. Although patient may have access to bad, low quality or detrimental information on the Internet, but whether good or bad, any piece of information can be used to initiate discussion with medical professionals or healthcare providers. From this point of view, whether bad or good, access to information gives confidence to patients to play active role in decisions that concern their health.

Thanuskodi (2010) in his study on the use of Internet and electronic resources for medical information among medical professionals of Tamil Nadu, it was found that two hours of access to Internet takes the first order reporting among users, followed by two to three hours of access, then, 3-4 hours, while above 5 hours of access to the Internet came last. The study further reveals that Internet virus, lack of skills, and limited access to computers as major challenges of using the Internet. Agarwal & Dave (2009) have studied the use of internet by the scientists and research fellows of Central Arid Zone Research Institute, Jodhpur (Rajasthan) and found that all the respondents accessed Google frequently, followed by Yahoo (85.29%). It was also discovered that majority of respondents (97.06%) use the Internet for research and education. In addition, an online survey which asked 12,262 people in 12 countries across the world in 12 different countries – Australia, Brazil, China, France, Germany, India, Italy, Mexico, Russia, Spain, UK and the United States of America, reveals that the proportion of people, who frequently access Internet for health-related reasons, is of particular importance in emerging economies like India (39 per cent), Russia (39 per cent), China (32 per cent), Brazil (29 per cent) and Mexico (27 per cent). The study adds that the towering cost of face-to-face contact with health professionals has made Internet a cheaper alternative of accessing information (Bupa Health Pulse, 2010).

A study conducted by the Pew Internet & American Life Project (2013) was found that 35 per cent of United State of America adults agreed that at one time or the other, they have gone online to seek for information about medical conditions either for themselves or someone else. When respondents were asked if the information they found online made them think of whether or not they needed medical attention, 46 per cent of respondents admitted that online information gave them impetus to seek for medical, while 38 per cent said they needed no medical attention because it was something they could take care of at home, while 11 per cent said they were in between. These findings lend credence to the fact that although Internet may not provide sufficient information for health decision, but it can provide necessary information that can propel patients to seek for help from healthcare professionals. The study summarised its findings thus: “35% of U.S adults have gone online to figure out a medical condition; of these, half followed up with a visit to a medical professional” (Pew Internet & American Life Project, 2013, p.1).

Rain (2007) using Health Information National Survey, explored the perception of traditional sources of information and the World Wide Web within the context of the uses and gratification theory. The study reported that perception of traditional information sources was a predictor to the use of Internet for health information. The study concludes that although some people may not even consider Internet as a viable source of medical information even if they have access, but identified trust as one of the factors that can motivate an individual to consider Internet as a source of medical information.

Koller, Grutters, Peltenburg, Fischer & Steurer (2000) investigated the use of Internet by medical

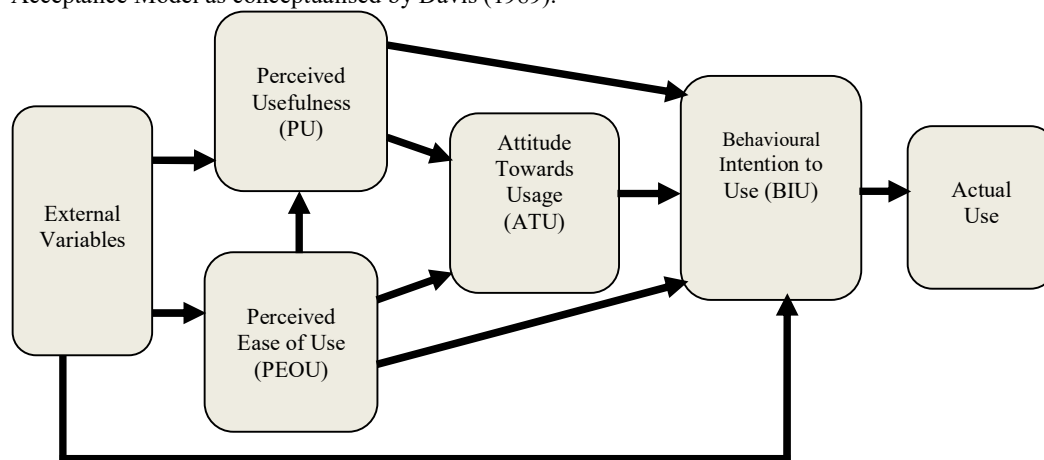
doctors in Switzerland. The Cross-sectional postal survey in German-speaking Switzerland which employed a purpose designed pre-validated 69-item questionnaire revealed that 75 per cent of the physicians reported access to the Internet, while only 7 per cent used the Internet during patient consultation. The study further identified time pressure and concerns about potential negative interaction with physician-patient communication as the main reason why the physicians did not use the Internet. The study concludes that for the Internet to be relevant to medical professionals it has to be designed to suit their information needs.

Casebeer, Bennett, Kristofco, Carillo & Centor (2002) surveyed 2,200 U.S. office-based physicians on their Internet information seeking behaviour and found that nearly all the physicians have access to the Internet, know how to use it to access information and as a matter of fact, use it to access information. The study further revealed that the Internet is mostly use by physicians in the area of professional and continuing development rather than for patient-physician communication. The study suggests that with the growing relevance of Internet in the area of continuing professional education, access to online resources must be easy, immediate and above all, the available information must be credible, relevant and up-to-date.

Adeleke et al. (2015) examined the use of computer and internet among tertiary healthcare providers and trainees in a Nigerian public hospital. The cross-sectional survey found that 36.6 per cent had accessed the Internet in the last three months and early exposure to computer was found to have significantly impacted on their current use of Internet. The study further suggests that in order to take advantage of the potentials that come with Internet technology, respondents require ICT training to boost their knowledge on Internet use. From the above, it is evident that although Internet may not be the only source of medical information, it can compliment other sources of information.

### 2.1 Theoretical Framework – Technology Acceptance Model (TAM)

The technology acceptance model (TAM) is an information systems theory that explains how users come to accept and use a technology. The model suggests that when users are presented with a new technology, the following factors would directly or indirectly influence their decision: perceived usefulness (PU) and perceived ease-of-use (PEOU). Davis (1986, p.985) defines perceived usefulness as “the prospective user’s subjective probability that using a specific application system will increase his or her job performance within an organizational context” and perceived ease of use as “the degree to which the prospective user expects the target system to be free of effort.” Other components to technology acceptance model include; “behavioural intention” which measures the strength of one’s intention to perform a specified behaviour; “attitude” which deals with individual user’s positive or negative feelings about performing the target behaviour and the “actual use” is measured in terms of frequency of system use (‘how often’) and the volume of system use (‘how much’) by the user (Fishbein & Ajzen, 1975). The figure below illustrates the various components of the Technology Acceptance Model as conceptualised by Davis (1989).



**Figure 1: Technology Acceptance Model**  
**Source: Davis, 1989**

Technology Acceptance Model has been applauded for its simplicity but has also been criticised for being too simple (Bagozzi, 2007). Also, TAM’s perspective of the relationship between human beings and technology is rather narrow; it considers technology as a non-negotiable road that must be travelled on by all, forgetting that there are fantastic technologies that have suffered the fate of rejection. However, in this study, Technology Acceptance Model was used to explain how health professionals in private hospitals make use of the Internet technology, taking into consideration its various components. In addition, the findings would add greater impetus to the Model, by looking identifying factors responsible for rejection of Internet by health professionals.

### **3. Method of Research**

#### **3.1 Study Area**

The study area was Anyigba, one of the emerging cities in Kogi State, Nigeria. The population of Anyigba stands at about 71,327 (Ifatimehin, Musa & Adeyemi, 2011). Kogi State University Anyigba is located in Anyigba and many commercial activities have sprung up due to the existence of the university. However, residents health needs are mostly serviced by private hospitals and herbal medical practitioners.

#### **3.2 Sampling Procedure**

The population for this study are all medical professionals in Anyigba. A two-stage cluster sampling method was employed in this study. In the first stage, eight private hospitals in Anyigba were randomly selected. In the second stage, all health professionals, including doctors, pharmacists, nurses, midwives, dentists, medical laboratory scientists, radiographers, and health record officers in the eight selected private hospitals in Anyigba were targeted. In all, 38 copies of questionnaire were administered and 30 copies were returned, yielding a response rate of approximately 79%. The qualitative data were sought through Key Informant Interview (KII). In the KII, four participants were selected taking into consideration their age, sex, and years of experience and participants were given opportunity to express themselves unfettered within some structured questions. The open-ended questions provided opportunity for the interviewer to probe responses of the participants. On average, each interview lasted for thirty minutes, and while the interviews were being conducted, notes and observations were taken. However, in the qualitative study, no rule was followed for the sample size; in qualitative study, there is no rule of thumb for sample size because “The validity, meaningfulness, and insights generated from qualitative inquiry have more to do with the information-richness of the cases selected and the observational/analytical capabilities of the researcher than with sample size” (Patton, 1990, p.185).

#### **3.3 Instrumentation**

The instruments for this study were designed after reviewing relevant literature. The questionnaire was used to gather the quantitative data while the interview schedule for the KII was designed to complement the questionnaire thereby allowing triangulation. According to Yeasmin & Rahman (2012, p.156), triangulation is a “process of verification that increases validity by incorporating several viewpoints and methods. In the social sciences, it refers to the combination of two or more theories, data sources, methods or investigators in one study of a single phenomenon to converge on a single construct, and can be employed in both quantitative (validation) and qualitative (inquiry) studies” and in recent years, this approach to studying social phenomenon has received reasonable attention by scholars and researchers.

#### **3.4 Data Analysis**

In order to boost the reliability of the research findings, this study triangulated both quantitative and qualitative data. For the quantitative data, the statistical software SPSS Version 16.0 was used for the analysis. Descriptive analytical tools such as mean, standard deviation and variance were used to describe the data. For the qualitative aspect of the research, data obtained from the interviews were analysed using thematic analysis. In the qualitative analysis, the interviews were transcribed, while codes were derived from the interview transcripts, then clustered together to form different themes and these themes were used to supplement in describing the quantitative data.

#### **3.5 Reliability Testing**

An important part of reliability testing is the pilot study which is “a small trial run of all procedures planned for use in the main study” (Monette, Sullivan & DeJong, 2002, p.9). In the pilot study for this research, 10 copies of the questionnaire were administered to health professionals in the study area. The use of double coding technique was employed; a situation where two interviewers seek for information from the same person at different times. At the end of the pilot, Pearson correlation test was conducted and average coefficient reliability stood at 0.7.

#### **3.6 Ethical Considerations**

In compliance with the international standards for ethics in social science research, all participants were duly informed of the objectives of the study; the protection of their confidentiality and anonymity was explained to them. In addition, permission of participants was sought through informed consent. “Informed consent means that research subjects have the right to know that they are being researched, the right to be informed about the nature of the research and the right to withdraw at any time” (Silverman, 2007, p.324).

### **4. Results/Discussion**

The instruments of the researcher were administered between 12<sup>th</sup> April and 27<sup>th</sup> April, 2016 within the study area. While questionnaire was used to gather the quantitative data, interview schedule was used to gather



qualitative data. For the quantitative data, interpretation was done using simple frequency and percentage, as well as descriptive statistical tools such as mean, standard deviation and variance, where necessary. The data gathered are here by presented as follows:

#### 4.1 Demographics

**Table 1: Respondents' Sex**

Sex	Frequency	Percent
Male	21	70
Female	9	30
Total	30	100

The analysis in the above table shows that the male respondents were 21 (70%) while the female respondents were 9 (30%). Even though the two sexes were given equal opportunity of being sampled, there was still a disparity. This is an indication that among the medical health professionals sampled, there were more male practitioners than female.

**Table 2: Respondents' Age**

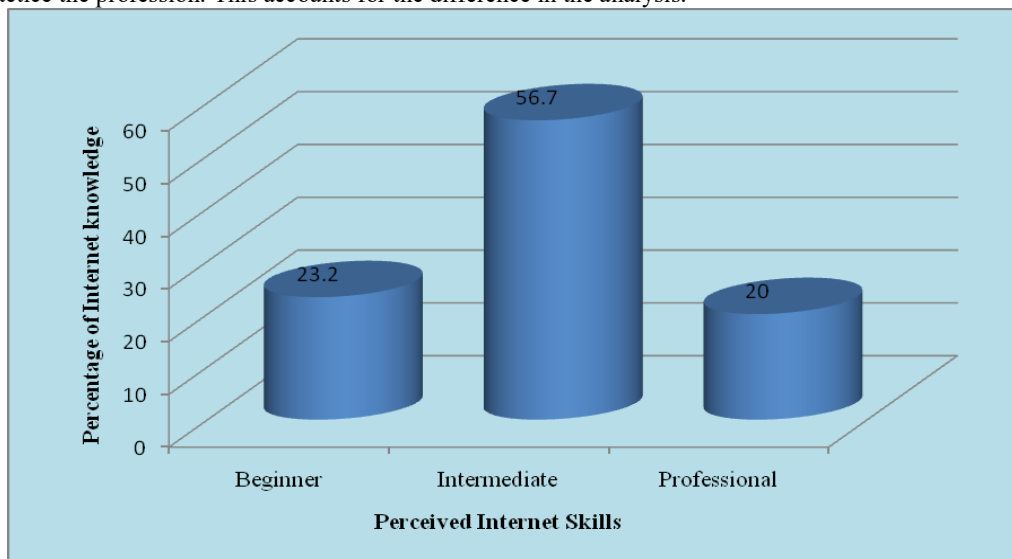
Age (Years)	Frequency	Percentage
Less than 31	7	23.3
31-40	10	33.3
41-50	7	23.3
51 and above	6	20.0
Total	30	100

The table above indicates that majority of the respondents fall between 31-40 age brackets. The table also shows that while those that are above 31 years of age and 51 years of recorded 23.3% and 20% respectively, the combined percentage of ages 31-40 and 41-50 is 56.6 %.

**Table 3: Respondents' Years of Experience**

Years of Experience	Frequency	Percentage
less than 6	6	20.0
6-10	8	26.7
11-15	11	36.7
16 & above	5	16.7
Total	30	100.0

The above table shows that most of the respondents have practised for over 11 years, while only 20% have practiced less than 6 years and 26.7% have practiced between 6 and 10 years. It should be noted that the medical practitioners' years of practice vary because of their different backgrounds in terms of when they began to practice the profession. This accounts for the difference in the analysis.

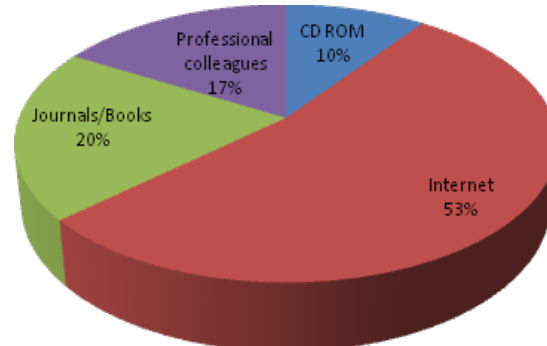


**Fig. Two: Respondents' Perceived Internet Skills**

From figure 2, it is seen that more than half of the respondents (56.7%) describe their skills of internet use as "intermediate" while 23.3% are "beginners" and only about 20% are "professional" internet users. The chart on the perceived internet skills follow the normal distribution curve where the intermediate internet users

are clustered at the centre of the chart while the beginners and professionals are skewed to the left and right respectively.

#### 4.2 Health Professional Uses and Preferences of Health Information Sources



**Figure Three: Respondents' preferences for health information sources**

Participants were asked of their most preferred source of information from four possible health information sources (journals/books, professional colleagues, Internet and CD-ROM. The above pie chart shows that 53% regarded Internet as their preferred information source, followed by journals/books (20%), while 10% of respondents preferred CD-ROM and 17% preferred their professional colleagues. This figure indicates that internet has become part and parcel of medical and health practice as it has been incorporated into professional routines of practitioners. From the qualitative study done, most health professionals interviewed admitted that they have integrated Internet into professional practice. A respondent interviewed said this:

Internet is very useful to us. There are certain pieces of information as regards prescription that I confirm on the Internet. It has simplified so many things. I relate with some of my clients on facebook; exchange vital information with professional colleagues. It has simplified relationship with my patients; I can easily share with them some videos, pictures and other important information that they may need (Respondent 4).

When asked what influenced participants' preference for a particular source of information, respondents identified cost, relevance to professional practice and how readily accessible are the sources as factors that they considered in their choice of possible information source. The qualitative and the quantitative findings are therefore in congruent with a recent study which found that the vast majority of health professionals in public hospitals access the Internet for professional information (See Adeleke et al., 2014). This is an indication that, be it private or public hospitals, Internet provide vital information that aids medical practice in Nigeria. This is so even among medical students (See Anyaoku et al., 2015). A systematic review of 19 studies published in 2003 describing information seeking behaviour of clinicians using quantitative approach, found that although there were varieties of information sources sought by clinicians, but text sources were identified as the most frequently hunted, followed by colleague, while one study found electronic sources to be primary resource (Dawes & Sampson, 2003). In the study, convenience of access, habit, reliability, high quality, speed of use, and applicability were identified as factors that make the information seeking effort effective (Dawes & Sampson, 2003). Considering the fact that the above study was done in 2003, such finding was expected, as Internet would have replaced text sources. One of the respondents interviewed, described Internet as an auxiliary brain meant to provide supporting assistance to the main brain, when the latter fails.

For us, Internet is our auxiliary brain. We do seek for specific and important information from the Internet. In medical practice, errors are not tolerated because for every error, human life is at risk. Internet provides the very smallest information that could help save a life (Respondent 3).

Another interviewee equally agreed that Internet was very useful to health professionals. He considered Internet as a platform through which medical professionals exchange information with their patients, in addition to using it to communicate with professional colleagues. This finding is in line with the stance of some scholars. According to Hardey (2001, pp. 388-389), Internet has collapsed "the boundary fences around previously carefully guarded information domains that form the basis for professional monopolies such as in medicine." Laing et al (2010, p.9) write that there is a radical shift from "passive constructions of the professional-patients relationship" to a more participatory approach to healthcare delivery where the patients are now taking responsibility for their own health. This approach empowers the consumers to take decisions that concern their lives; it not only helps to enhance better outcomes for the individual consumer, it also helps to enhance efficiency and effectiveness on the part of service provider (Laing et al., 2010). Some health practitioners were of the opinion that patients in this Internet age are more informed than those of the previous generations.

Today’s patients are more empowered as they constantly argue with us in some areas that concern their health. Sometimes, I’m amazed at the quantum of information at their disposal. Whenever drugs are given, they ask question; when injection is given, they also ask. In fact, some ask question on virtually anything and everything that is related to their health. The truth is that today’s patients are more informed than patients of the past generations (Respondent 2).

Anderson, Rainey & Eysenbach (2003) once points out the discomfort some doctors feel “on having to deal with a patient who is perhaps better informed than [themselves] or who even comes into the office already with a concrete diagnosis and/or therapy in mind” (p. 78). Kiley (2003) elaborating on this challenge stresses that the fecundity of information at the disposal of some patients breed some kind of utopian expectation, thereby leading to what Mittman & Cain (2001) described as “self-destructive beliefs” as well as “false medical understandings that undermine relationships with their physicians” (p.57). In addition, such prior information can breed “random, incorrect and often dangerous antiscientific or pseudo-scientific information” (Mohammed, 2012, p. 61). More dangerously is the fact that patients regard online information as being of high credibility (Diaz et al., 2002). One respondent shared the above sentiment;

Some patients even challenge us. When you ask question, they will tell you that they read it on the Internet. One pregnant woman once told me that she has an online Doctor who advices and counsels her on diverse health issues, ranging from family planning, how to take care of a new-born baby, how to take care of herself after birth. She said that she is even more open to her online Doctor than my humble self because according to her, she could share all manner of personal issues with him (the online Doctor). (Respondent 2).

#### 4.3 Internet Use for Medical/Health Practice

Descriptive analysis was used to measure the extent of Internet usage for health practice by health professionals. The five-point Likert Scale, ranging from very often (5), often (4), occasional (3), rarely (2) and never (1) shows that health professionals in private hospitals in Anyigba, Kogi State, mostly use the Internet to get professional updates (Mean = 4.02; Standard Deviation = 1.58; and Variance = 2.51); the second most important use of Internet was for communicating with patients (Mean = 3.94; Standard Deviation = 1.55; Variance = 2.41). A cursory look at the table shows that the use of Internet to access patients medical information recorded the lowest mean (2.52); Standard Deviation = 1.63; Variance = 2.66. This indicates that most private hospitals in the study area still depend on the analogue means of storing and retrieving patients’ medical and health records. Table 4 therefore reveals that health professionals in private hospitals in Anyigba use the Internet as an avenue to communicate with professional colleagues and patients. They also use the Internet to monitor trends of disease as well as when dispensing drugs and medications to patients.

**Table 4: Respondents’ Internet Use for Medical/Health Practice**

Possible Internet Uses	Mean	STD Deviation	Variance
Contact professionals	3.38	1.73	2.97
Communicating with patients	3.94	1.55	2.41
Professional Updates	4.02	1.58	2.51
Information on Lifestyle	2.61	1.63	2.66
Access patient medical records	2.52	1.63	2.66
Monitor trends of new diseases	3.59	1.75	3.05
Drugs/medication	3.77	1.39	1.94

#### 4.4 Rejection of Internet for Medical Information

There is no doubt many health professional interviewed have integrated Internet into their medical practice, there are those who though, use the Internet for other purposes such as sending/receiving mails, social connection, Internet gaming, and transactions, but abhor using it for health purposes. Some health professionals believe that the issue of life is too sensitive to gamble with, stressing that legion of information on the Internet are not reliable for any health professional who knows his or her worth to depend on. A respondent, a male medical doctor who was in his late 50s, cautioned against over-reliance on Internet information, stressing that not all information on the Internet is credible.

The question I always ask the Internet users are: how competent are those who place the information there? How credible are the fragments of information people access on the Internet? If those pieces of information are perceived credible, why do patients still consult us? Even though Internet has made information ubiquitous, online resources cannot replace the function of a Professional Doctor (Respondent 3).



#### 4.5 Conclusion and Recommendations

The use of Internet for development purposes has dominated the public spheres in recent years, and this includes health practices. In this study, efforts were made to identify the extent to which Internet has been integrated into health and medical practices among private health professionals in Anyigba, Kogi State, Nigeria. This study has proven that Internet is at the centre of development efforts in modern days, particularly in health and medical practices. The study has also established the relationship between Internet technology and humanity. When technology is invented, human beings modify it to suit their needs in a manner that the inventor never envisaged; the process we term “humanisation of technology”. On the other hand, there is what we call “techno-humanisation”, a situation where man continues to employ technology in all his activities until the technology becomes his habitation. In other words, while human beings have modified Internet to cater for the information needs of health professionals, Internet on the other hand has shaped the manner in which health professionals provide health services. There is therefore a mutual relationship between human beings and technology – technology shapes humanity by providing answers to some critical questions about the functionality of human being in the society; and human being in return create and recreate technology in a manner that will suit his existence. The study further indicates that while many health professionals have incorporated Internet into their health management efforts, few still consider Internet as unreliable, complex to use and grossly unfit for health practices. For this reason, there is need for stakeholders to foster the incorporation of Internet in the medical sector for improved performance. In addition, health professionals must promote capacity building for their younger generation to learn about Internet-based applications that can aid medical practices. Also, the government must ensure that medical practitioners have access to requisite information on the Internet, by providing congenial atmosphere for information technologies to thrive. Further, necessary regulatory bodies should make it mandatory for Information and Communication Technologies (ICTs), especially the Internet and computers to be provided and used in hospitals, whether private or public.

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