USE OF INTERNET FACILITIES FOR HEALTH COMMUNICATION AND INFORMATION SHARING IN AHMADU BELLO UNIVERSITY TEACHING HOSPITAL, ZARIA, NIGERIA

Jamila Mohammed Dahiru
Ahmadu Bello University, Zaria

Abstract
This study examines the level of awareness and use of Internet facilities for communication and information sharing among medical personnel in Ahmadu Bello University Teaching Hospital. Premised on the tenants of Technology Acceptance Model (TAM), the study adopted descriptive survey method with questionnaire distributed among 200 respondents for data gathering. The data gathered were analyzed using simple descriptive method of data analysis with tables, frequencies and percentages. The findings revealed that all the respondents are aware and mostly use Internet facilities such as Email, Intranet, Intranet emails, websites and Facebook for communication and information sharing for effective health care service delivery in the hospital. The research concludes that communication and information sharing is vital to the success of any organization and recommends that sensitization on new and improved facilities for communication and information sharing should be adopted for the hospital to be able to gear up towards responding to the ever changing demands of the information age; and for compliance on the latest trends in information and communication technologies.

Key words: Internet Facilities, Communication, Information Sharing, Medical Personnel, Healthcare delivery

Introduction
Communication and information sharing is critical to meeting organizational objectives, as they help to determine the overall connectivity that exists among members of organizations. Internet facilities are tools and incentives that augment and promote real collaboration communication and information sharing within an organization to provide effective, safe and efficient services. As such, organizations must share information with each other about their services to both internal and external clients as information is the backbone of any organization success. Such information sharing needs to be strategically managed through procurement of quality up to date gadgets and tools that will enhance and ensure quality service delivery and productivity which is essential for growth and flow of any future-oriented organization.

The Internet has become fundamental necessities to living, working, interacting and communicating with people. Their services allow individuals to become part of the global world. Providing access to customized mailing groups and bulletin boards for groups of users have enhanced collaboration on various tasks such as homework. In addition, new media allow people to have access to a common folder or files; this enhances timely completion of projects. Other new media features such as websites and blogs make operations public to the world and sharing of information easily.

New media facilities divided into two groups as communication services and information services are recognized as essential parts of its development. They constitute the main reason it was developed and accepted rapidly. The communication services allow use of internet as a mediating tool for communication between two or more individuals, these include email, instant messaging, social networking, tweeting and video conferencing. Internet information sharing facilities in turn allow for a multi-directional transfer of knowledge through series of data-driven webpage's and web applications. As an information-sharing platform, internet provides a centralized computer system that allows authenticated users to collect, manage and share structured and unstructured data sets from a variety of sources. The information sharing facilities were also designed to facilitate two-way communication between users. (Keeley, Bullen, Bates, Katz, & Choi, 2015)

These provisions by the new media have changed the ways in which people connect, exchange
ideas and build knowledge. Open collaborative and user-driven online platforms encourage dialogue; sharing of information and good practices around critical issues, and have a good potential for generating new knowledge and increasing transparency. Ultimately, the internet offers computer-based collaborative systems such as intranets, electronic mail, list servers and websites that provide much increased communication information sharing within and across organizations. By use of new media, this study refers to the use of computer-based systems to accomplish both communication and information sharing activities such as communicating, accessing, searching, sharing, storing, and publishing of information in a computer network within a person's work unit/department/organization (i.e. internal information activities) as well as externally to the person's organization (i.e. external information activities).

Organizations including the health sector have come to rely on the internet and other new media for their day-to-day operations, planning, and decision making. Based on these, Tiger (2007) posited that the healthcare delivery environment has found itself in the midst of this revolutionary changes where health care providers are expected to be able to provide safe, competent care in a highly technical and digital environment; using new developments, new medications, and new technologies to allow them perform their tasks effectively. New media have become important tools used in the development of healthcare to improve the quality and safety of patient care.

According to Health IT Workforce (2012), internet facilities in the health care delivery can be utilized by the medical personnel for healthcare assessment, diagnosis, planning, implementation, and information sharing related activities as part of clinical decision making in order to lead, co-ordinate and support the delivery of safe, effective and person centered care. This is because it has been proven that use of internet assisted facilities among health personnel can boost their service delivery and help in reducing the risen concern on the lack of health personnel in some countries such as Nigeria.

With all the benefits, availability and accessibility of internet and other new media technologies in Nigeria, it has been observed that their potentials for communication and sharing of health related information among medical personnel have not been effectively utilized. This study therefore aims to find out if this observation is true in the context of Ahmadu Bello University Teaching Hospital, Zaria which happens to be one of the largest university teaching hospitals in Nigeria, hosting about 20,000 medical personnel and which was provided with internet facilities for effective care delivery.

This paper focuses on the level of awareness and usage of internet and other new media technologies to facilitate communication and information sharing among medical personnel in Ahmadu Bello University Teaching Hospital (ABUTH). Communication and Information sharing in this context is the ability of the medical personnel to conduct and exchange related information, situational awareness and communication on health activities. The study also refers to levels of use of internet and other new media technologies for communication and information sharing among medical personnel as intra level (between departments within ABUTH such as units and departments or just among individuals across the hospital) and inter level (between the hospital and other hospitals or related external publics).

The new media technologies according to this paper are websites, intranet and/or other social network platforms such as Facebook, Twitter, Blogging, LinkedIn, which can be used for communication and information sharing among the medical personnel in Ahmadu Bello University Teaching Hospital (ABUTH). Accordingly, the study has the following objectives.

1. To find out the level of awareness of internet facilities among medical practitioners in ABUTH
2. To find out the types of Internet facilities available for communication and information sharing among medical personnel in ABUTH
3. To find out the most used internet facilities for communication and information sharing among medical personnel in ABUTH
4. To find out the most preferred internet facilities for communication and information sharing among medical personnel in ABUTH
5. To find out the reason for the preference of the internet facilities for communication and information among medical personnel in ABUTH
6. To find out the challenges encountered in the use of Internet facilities for communication and information sharing among Medical practitioners in ABUTH.

To achieve the set objectives, the following research questions were posed accordingly:
1. What is the level of awareness of internet facilities among medical personnel in ABUTH?
2. What types of Internet facilities are available for communication and information sharing in ABUTH?
3. What Internet facilities are mostly used for communication and information sharing among medical personnel in ABUTH?
4. Which is the most preferred internet facilities used for communication and information sharing among medical personnel in ABUTH?
5. What are the reasons for the preference of the internet facilities for communication and information among medical personnel in ABUTH?
6. What are the challenges encountered in the use of Internet facilities for communication and information sharing among medical personnel in ABUTH?

This study will help researchers studying internet facilities for communication and information sharing in the health care organizations and pave way for future studies on other related platforms of communication such as use of social media or other networking cites as well as the study of health Informatics. Stakeholders and management of ABUTH can also find this study useful towards understanding the situation of internet facilities use and adaptation in the hospital for perusal.

**LITERATURE REVIEW**

**Internet Facilities**
The Internet consists of tools that store, receive and transmit information electronically. Information and communication technology, which is a product of the Internet, has made it easier to access and share information than the conventional method of writing letters and sending them through the post office. Providing various facilities, including email, instant messaging, social networking, tweeting and video conferencing which makes it possible for people to communicate instantly with each other from any part of the world at a relatively cheaper cost and in a more efficient way. The Internet also offers website and blogging services that organizations use to promote their operations globally. The internet facilities include email, Skype, Twitter, instant messaging and video conferencing, the World Wide Web and instant access to information which are among the important services provided using on the net. Other fundamental services provided through the Internet include e-commerce, e-learning, e-health and Internet banking (Idowu, Comfort, and Bastin, 2008)

According to Keeley, Bullen, Bates, Katz, & Choi (2015), internet facilities can be generally divided into two groups which are communication services and information services. In the first group the Internet mediates in the communication between two or more individuals (involves email, instant messaging, social networking, tweeting and video conferencing). In the second group the user turns to the Internet-service in search for some particular information (offers website and blogging services that organizations use to promote their operations globally).

**Communication and Information Sharing**
With advances in Information and Communication Technology (ICT), sharing information across has become feasible. It has become a key ingredient for organization's seeking to remain competitive. Organizations and professions use internet for information sharing to stay competitive and boost profitability. Hertzum (2008) emphasized that information sharing has a central role in collaborative information seeking, and defined it as, ‘activities performed by actors to inform their collaborative work combined with the collaborative-grounding activities'.

Dawes (1996) defined information sharing as exchanging information within and across government agencies or otherwise giving access to information. Besides that, electronic information sharing can be referred as information sharing using information communication technologies such as electronic mail, computer databases and information repository. (Akbulut, Kelle, Pawlowski, Schneider, & Looney, 2009)

According to Yang & Maxwell (2011), three factors can be traced why information sharing become new goal for public organization: (1) tragedy 9/11 that underscored the failure of prior governmental information sharing practices; (2) policy changes that emphasized cross' government coordination to improve efficiency and reduce waste; (3) changes in technology that allowed organizations to exchange information based on standard transmission and information exchange protocols. Advances in information and communication technology (ICT) enable companies to share information. For
example, the Internet allows organizations to transfer digital data instantly and with high fidelity at nearly zero marginal cost. This means that there are no technical obstacles involved.

Huang and Gangopadhyay (2004) studied various degrees of information sharing in a four-stage supply chain which comprises of customers, retailers, distributors, wholesalers, and manufacturers, in which each stage comprises several players. Three scenarios are analyzed: no information sharing; partial information sharing (only 50% of trading partners in each channel involved); and full information sharing. The simulation study found that increasing degree of information sharing resulted in decreased inventory levels at wholesalers. The benefits are higher when demand is highly variable. The study concluded that parties obtain different benefits from information sharing.

Furthermore, Lee & Whang (1998) proposed three system models of information sharing: the Information Transfer Model, the Third Party Model, and the Information Hub Model. In the Information Transfer Model, a partner transfers information to the other who maintains the database for decision-making. This is a natural evolution from the EDI-based transactional model. The problem with this model is that a company doing business with multiple partners has to provide different interfaces and support multiple standards. The Third Party Model involves a third party whose main function is to collect information and maintain it as a database for the supply chain. The Information Hub Model is similar to the Third Party Model except that the third party is replaced by a system as an information hub. The four primary information sharing design patterns are sharing information one-to-one, one-to-many, many-to-many, and many-to-one. Technologies to meet all four of these design patterns are evolving and include blogs, wikis, really simple syndication, tagging, and chat.

Challenges in Using Internet Facilities for Communication and Information Sharing

Realizing the benefits of information sharing depends on companies' ability to utilize shared information in their business processes. (Kulp & Lee, 2004) did a survey to investigate the impact of information sharing on companies' performance. They found that the highest profit margin companies are not simply exchanging information but they combine it with close collaboration.

There are a number of interrelated factors that can affect communication and information sharing. According to Richardson and Asthana (2006), they include individual and agency interpretations of policy documents and legislation, governance structures, technical factors such as compatibility of computer systems, training and support. Yang and Maxwell, (2011) added other factors which are organizational structure and culture, trust, rewards, incentives and other social factors and individuals' beliefs about information sharing. Valentine and Hilferty (2012) stated that some barriers to use of internet for communication and information sharing are systemic or entrenched and that they can only be resolved by policy responses rather than changed working arrangements by services. Dawes, 1996; Yang and Maxwell (2011), viewed that factors influencing information sharing can be from three key perspectives which are technological, organizational, and political/policy.

Research findings has also indicated that there are differences in countries and locations when it comes to barriers to communication and information sharing. For example, Bellamy, Raab, Warren, & Heeney (2008) found that information is not always shared when it should be and is sometimes shared when it should not be. On the other hand, Lips et al., (2011) as cited in Keely et al (2015) in a New Zealand research found a lack of legal provision for sharing information and that 'need to know' criteria continue to apply, with client consent used to provide specific personal information to other agencies and professional reliance on 'off the record' information.

Munn, (2003) in a study of factors influencing service coordination in rural communities in South Australia found that the preferred option and perceived best practice for sharing information about service users was informal contact, but at the same time, concerns about confidentiality and gossip were nominated as inhibitors.

Empirical Review

Laite (2000) presented the results of a survey on internet use of 406 graduates and found that the majority of graduate and undergraduate students used the Internet one to two times per week. E-mail was found to be the most used internet service as 100% of the graduate and undergraduate students used it. The same way, Kalichman, Weinhardt, Benotsch, Difonzo, Luke, & Austi (2002) conducted a survey on the Internet access and use for health information among people living with HIV-AIDS. They found that the majority of respondents were unaware of the availability of health information on internet.
Akporido (2005) did a survey study to investigate the internet usage patterns in a Nigerian suburban setting Abraka Delta State. His findings revealed that the personal characteristics of the respondents, different aspects of their Internet use, such as duration of Internet usage access time, motivation for using the Net, search engines employed, Internet skills acquisition, frequency of Internet use, evaluation of Internet information content, problems encountered while using the Internet as well as way forward.

Badu and Markwei (2005) conducted another survey research on the extent of awareness and use of the internet and its resources among students and staff in Ghana and found that the respondents are fully aware of the internet and most of its services. The study established that e-mail was highly used by both staff and students as they found it to be a very useful resource and that barriers to use of internet is inadequate training.

A survey of 81 users of a Cyber cafe owned and run by the Delta State University, Abraka, was conducted by Igun (2005) to examine the self-reported level of Internet skills. The results showed that 71% of respondents rated their Internet skills between averages and very high; 78.8 acquired their Internet skills either online or through teaching by colleagues or friends. WWW skills were the most sought after additional skill (73%). Continuing education and self-study were the most preferred ways to acquire new skills.

Asema (2005) also conducted a survey research on the search habits of internet users at the Medical University of Isfahan (MUI). Results showed that all the respondents were using the Internet frequently because all faculties have provided connection to the Internet. He found that they used the Internet in different ways, such as accessing online journals, downloading software or text, chatting, discussion, and e-mail services and for finding related information.

Marshall and Bly (2004) focused their research on the function and value of information sharing. They propose three explanations for why people might share information with others which are to establish mutual awareness between information giver and information receiver; to educate or raise consciousness; and to develop rapport. The second reason may reflect a value that is of great importance to the individual who shares the information, but the information is probably unknown or not initially held by the information receiver. The shared information may reflect the common interests of the individual who shares information and the individual who receives information. In such instances, information-sharing behavior is employed as an approach to strengthen social ties and relationships between information givers and receivers.

Jarvenpaa and Staples (2001), conducted a survey on the use of computer for information sharing and communication where it was found that having adequate computer skills is important to facilitate information sharing and communication in an electronic media environment with the belief that organizations should enhance internet based information systems so as to provide valuable and effective sharing of information.

Theoretical Framework

This study is premised on Technology Acceptance Model (TAM) an adaptation of Theory of Reasoned Action (TRA). Propounded by – in – Comment: provide the proponent and the year in the baps. It is a well-known model related to technology acceptance and use and has also been proven to be a theoretical model used to explain and predict user behavior on information technology (Legris, Ingham, and Collerette, 2003); why a user accepts or rejects information technology is influenced directly or indirectly by the user's behavioral intentions, attitude, perceived usefulness of the system, and perceived ease of the system.

Davis (1989) contended that, the basic assumption of the theory is that Perceived Usefulness and Perceived Ease of Use determine an individual's intention to use a system with intention to use serving as a mediator of actual system use. Perceived usefulness is also seen as being directly impacted by perceived ease of use. He applied the model to work settings, and defined Perceived Usefulness as "The degree to which a person believes that using a particular system would enhance his or her job performance." (Davis, 1989, P. 320)

That in non-working settings, the goal becomes personal objectives instead of enhancing job performance. For example, a Perceived usefulness goal or "job" of a health care consumer in selecting a physician (using web-based data) hypothetically is to identify a highly qualified health practitioner. In this circumstance, web based information is useful to the extent it helps achieve the latter goal.

He also defined Perceived Ease of Use as "The degree to which; a person believes that; using a particular system would be free of effort" (Davis, 1989, P. 320).
An attempt to improve TAM resulted to its extension to include TAM 2 (Legris et al., 2003) and The Unified Theory of Acceptance and Use of Technology (Or et al., 2011). These extended models include additional explanatory variables. The variables added to these extended models is subjective norms in TAM 2 and social influence in the Unified Theory of Acceptance and Use of Technology.

Or et al. (2011) found that subjective norm's impact on behavioral intent was mediated by PU. The association between PU and behavioral intention is partially mediated by attitude, further suggesting the primary effect of PU on behavior and the secondary or supporting effect of PEOU.

As suggested in TAM2, subjective norm, one of the social influence variables, refers to the perceived social pressure to perform or not to perform the behavior (Ajzen, 1991). It seems important to determine how social influences affect the commitment of the user toward use of the information system for understanding, explaining, and predicting system usage and acceptance behavior. (Malhotra & Galletta, 1999)

In general, according to the theories, the variables related to the behavioral intention to use information technology or to the actual use of information technology could be grouped into four categories:
1. individual context,
2. system context:
3. Social context which means social influence on personal acceptance of information technology use. and
4. Organizational context which emphasizes any organization's influence or support on one's information technology use.

Methodology
The study adopted descriptive survey method. A descriptive research attempts to picture or document an event, conditions or attitudes so as to describe what exist at the moment (Wimmer & Dominick, 2000). Descriptive research is primarily concerned with the collection and analysis of data for the purpose of describing, evaluating or comparing current or prevailing practices, events and occurrences. Babbie (2001) also observed that, “scientific descriptions are typically more accurate and precise than are casual ones.

Questionnaire formed the instrument of data collection of the research. The questionnaire contained both open and close-ended questions designed to elicit information from the samples drawn. The closed ended questions were designed to answer research questions 1, 2, 3 and 4 about awareness of internet facilities, available internet facilities, most used and most preferred internet facilities for communication and information sharing among the respondents in the study location. While the open-ended questions were designed to get answers to the research questions 5 and 6 which were about reasons for preference of internet facilities and the challenges encountered in the use of internet facilities for communication and information sharing.

200 medical personnel where randomly selected as the sample of the research. They included health personnel's working in ABUTH Zaria. Multi-stage sampling procedure was employed in sampling the respondents. The first stage involved stratified random sampling technique the research population were categorized into subgroups (strata) according to specializations of Doctors, Nurses, and Lab Scientists/technician and Health Information record officers. The 200 sample size was disproportionately distributed across the four specializations; making each group to have 50 respondents. This technique is considered useful for this study because it allows classifying a population for equal chance of representation to ensure that each subgroup is appropriately, approximately and proportionately represented (Emmanuel, 2013).

The second stage of the sampling procedure involved picking the samples. The simple random sampling technique was employed in this stage where the samples were randomly picked using raffle draw method of simple random sampling across the stratified specializations going by the proportional distribution of the strata. Raffle draw picking was done by putting names of all the elements of a group (in this case all the elements of a stratum) on a sheet of paper and then the researcher picked the desired number of the samples needed (in this case number 50 samples from each stratum/specialization). Simple random sampling was chosen for this stage because it also gives all the elements equal chance of being included in a sample (Bhattacharjee, 2012; Croucher & Cronn-Mills, 2015). The data gathered was analyzed using descriptive methods of data analysis such as percentage and tables.
Result and Discussion

All the 200 copies of the questionnaire administered were retrieved but 11 were rendered invalid. Therefore, 189 copies of the questionnaire have been analyzed and presented below.

The research respondents included medical personnel in ABUTH consisting of medical doctors, doctors [(50=26.5%), nurses (50=26.3%), laboratory technicians/scientists (50=26.5%), health information (39=19.5%), between the ages of 30 and above (72 = 17.1%), below 30 years, (117=52.1%). The age range of the respondents shows age grades of people that are most likely to be within the digital divide age bracket.

The respondents' educational level varies between HND/MBBS (115-60.9%), MSc (27-14.3), OND/ND (29=15.3%) and other certifications (18=9.5%). This is inclined to the fact that most of the qualifications offered in medical line are HND/BSc. And MBBS for doctors. This educational level result is also in line with the specialization of the respondents which goes as having more of medical doctors, nurses and lab scientist whose certificates are HND and upward. Educational level was considered because it is believed to be a good indicator that determine use of technology.

Since the level of education can be a plus for using a technology, the respondents working experience was sought for to see if it may also have a bearing in their awareness and use of the internet facilities in their place of work (hospital). The result shows that most of the respondents have 0 -5 working experience (109=57.7%). Others have 6 – 10 years, (54= 28.6%)11 – 15 years, (21 =11.1%) and 21 –25 years(5=2.6%) working experience. table 1.1 shows distribution of the respondents demographics across gender, age, qualification and years of working experience.

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Description</th>
<th>N</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>30 years +</td>
<td>117</td>
<td>52.1</td>
</tr>
<tr>
<td></td>
<td>-30 years,</td>
<td>72</td>
<td>17.1</td>
</tr>
<tr>
<td>Specialization</td>
<td>Nurses</td>
<td>50</td>
<td>26.5</td>
</tr>
<tr>
<td></td>
<td>Doctors</td>
<td>50</td>
<td>26.5</td>
</tr>
<tr>
<td></td>
<td>Lab Technicians</td>
<td>50</td>
<td>26.5</td>
</tr>
<tr>
<td></td>
<td>Health Information Record Officers</td>
<td>39</td>
<td>19.5</td>
</tr>
<tr>
<td>Level of Education</td>
<td>HND/MBBS</td>
<td>115</td>
<td>60.9</td>
</tr>
<tr>
<td></td>
<td>MSc</td>
<td>27</td>
<td>14.3</td>
</tr>
<tr>
<td></td>
<td>OND/ND</td>
<td>29</td>
<td>15.3</td>
</tr>
<tr>
<td></td>
<td>Other s</td>
<td>18</td>
<td>9.5</td>
</tr>
<tr>
<td>Years of Working Experience</td>
<td>0 -5</td>
<td>109</td>
<td>57.7</td>
</tr>
<tr>
<td></td>
<td>6 - 10</td>
<td>54</td>
<td>28.6</td>
</tr>
<tr>
<td></td>
<td>11 - 15</td>
<td>21</td>
<td>11.1</td>
</tr>
<tr>
<td></td>
<td>21 - 25</td>
<td>5</td>
<td>2.6</td>
</tr>
</tbody>
</table>

These demographics are necessary in the discussion of findings as they cross tabulated to the respondent's awareness and usage of internet facilities. These are factor that was believed to motivate users to adopt and use an innovation as suggested/in line with the theory (TAM) used in this research.
Awareness of Internet Facilities
To find out the level of awareness of internet facilities among the respondents as it relates to the research question one (1). The respondents were asked to state if they are aware of internet and its facilities which all of the respondents (n-189) responded positively.

Types of Internet Facilities Available in ABUTH
An open ended question was followed to strengthen their response on awareness of internet facilities and to know the internet facilities available in ABUTH necessary to answer research question 2. The respondent's responses captured in table 2 shows that, the available internet facilities in ABUTH include email, Intranet, Intranet email, website, instant messaging, and social media platforms such as Facebook, LinkedIn, and Twitter.

<table>
<thead>
<tr>
<th>INTERNET FACILITIES</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMAIL</td>
<td>189</td>
<td>100%</td>
</tr>
<tr>
<td>INTRANET</td>
<td>189</td>
<td>100%</td>
</tr>
<tr>
<td>INTRANET EMAIL</td>
<td>189</td>
<td>26.5%</td>
</tr>
<tr>
<td>WEBSITE</td>
<td>151</td>
<td>81.5%</td>
</tr>
<tr>
<td>INSTANT MESSAGES</td>
<td>166</td>
<td>87.8%</td>
</tr>
<tr>
<td>FACE BOOK</td>
<td>154</td>
<td>81.5%</td>
</tr>
<tr>
<td>LINKEDIN</td>
<td>51</td>
<td>27%</td>
</tr>
<tr>
<td>TWITTER</td>
<td>14</td>
<td>7.4%</td>
</tr>
<tr>
<td>BLOGS</td>
<td>44</td>
<td>23.3%</td>
</tr>
</tbody>
</table>

The table also shows that the Email, Intranet and instant messaging are the most known available types of Internet facilities for information sharing and communication among the respondents followed by Facebook and website while others (LinkedIn, Twitter, and Blogs) suffered low response as indicated in the result. This may be because of the respondent's specialization which is more demanding and also the view by some others that those facilities are more of socialization than official purposes.

Internet Facilities Used for Communication and Information Sharing
To answer research question 3 about the internet facilities used in ABUTH for communication and information sharing, the respondents were asked in an open-ended question the internet facilities they are using in ABUTH. Their responses as analyzed in table 3 below corresponds with awareness of available internet facilities result. All the respondents indicated email and intranet as their most used internet facility available in ABUTH, followed by Facebook (152=80.4%). Though website (95=50.3%) and instant messaging (112= 59.3%) are also used by majority of the respondents for...
health related communication and information sharing, the difference in the awareness (n=189) which was more higher than that of availability puts a question in mind in relations to the theory adopted in the study which adds other variables one of which is availability of technology for an individual acceptance and use of technology.

Also the percentages of the respondents using Twitter, LinkedIn and blogs are low (5=2.6%, 5=2.6% and 3=1.6% respectively). This is not surprising since it corresponds to the percentage of the respondents that indicated that they are aware of them as communication and information sharing internet facilities as well as their availability in ABUTH.

Table 2: Internet Facilities Used for Communication and Information Sharing

<table>
<thead>
<tr>
<th>INTERNET FACILITIES</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMAIL</td>
<td>189</td>
<td>100%</td>
</tr>
<tr>
<td>INTRANET</td>
<td>189</td>
<td>100%</td>
</tr>
<tr>
<td>WEBSITE</td>
<td>95</td>
<td>90%</td>
</tr>
<tr>
<td>INSTANT MESSAGES</td>
<td>112</td>
<td>80%</td>
</tr>
<tr>
<td>FACE BOOK</td>
<td>156</td>
<td>65%</td>
</tr>
<tr>
<td>LINKEDIN</td>
<td>5</td>
<td>2.6%</td>
</tr>
<tr>
<td>TWITTER</td>
<td>5</td>
<td>2.6%</td>
</tr>
<tr>
<td>BLOGS</td>
<td>3</td>
<td>1.6%</td>
</tr>
</tbody>
</table>

This relates to Badu and Markwei (2005) who found that majority of their respondents use the websites and email services while low number of respondents use other platforms for information sharing such as LinkedIn, Twitter and Blogs.

Most Preferred Internet Facilities among the respondents and reasons for the Preference

The research question 4 asks about the most preferred internet facility among the respondents in an open ended question. Expectantly, the result shows that email and instant messaging are the most preferred internet facilities mentioned by the respondents (65%), followed by website and social media networks specifically Facebook (31%). Only 4% respondents mentioned website as the most preferred internet facility for communication and information sharing. Also corresponding with the most used internet facilities, none of the respondents mention Blog, LinkedIn and Twitter as their most preferred internet facility for communication and information sharing.

Reasons for the Respondents Preference of Internet Facilities for Communication Information Sharing in ABUTH

Reasons for the respondents' preference of internet facilities for communication and information sharing to answer research question 5 was asked in an open ended question. The responses were categorized and they include easy to use, availability, instant feedback, maturity, simplicity, and more
interactive in nature. This supports also the assumption of the theory (TAM) as used in the study especially the respondents' answer on ease of use as it states that perceived ease of use and usefulness can motivates an individual to adaptation and use of a technology. The fact that the respondents mention that their reasons for preference of some internet facilities (Majority of which by average indicated email, intranet, instant messaging, website, and Facebook as the most preferred internet facilities above) supports this argument.

Going deeper to see whether preference over a facility have any bearing with satisfaction derived from using the facility not only because of availability, the respondents were asked to rate the level of satisfaction they derived from using an internet facilities with the aid of a Likert scale (highly satisfied, satisfied, neutral, unsatisfied, highly unsatisfied). The result is presented in the table below.

Table 3: Level of Satisfaction on the Internet Facilities Used

<table>
<thead>
<tr>
<th>INTERNET FACILITIES</th>
<th>HIGHLY SATISFIED</th>
<th>SATISFIED</th>
<th>NEUTRAL</th>
<th>UNSATISFIED</th>
<th>HIGHLY UNSATISFIED</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Email</td>
<td>189 = 100%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Intranet</td>
<td>189 = 100%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Intranet email</td>
<td>2 = 1.1%</td>
<td>172 = 91%</td>
<td></td>
<td>15 = 7.9%</td>
<td></td>
</tr>
<tr>
<td>4. Website</td>
<td>170 = 89.9%</td>
<td>18 = 9.5%</td>
<td></td>
<td>1 = 0.5%</td>
<td></td>
</tr>
<tr>
<td>5. Instant messages</td>
<td>189 = 100%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Face book</td>
<td>14 = 7.4%</td>
<td>54 = 28.6%</td>
<td>119 = 62.9%</td>
<td>2 = 1.1%</td>
<td></td>
</tr>
<tr>
<td>7. LinkedIn</td>
<td>45 = 23.8%</td>
<td>5 = 2.6%</td>
<td></td>
<td></td>
<td>118 = 62.4%</td>
</tr>
<tr>
<td>8. Twitter</td>
<td>71 = 37.6%</td>
<td>67 = 35.4%</td>
<td>51 = 27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Blogs</td>
<td>34 = 18%</td>
<td>36 = 19%</td>
<td></td>
<td></td>
<td>118 = 62.4%</td>
</tr>
</tbody>
</table>

Accordingly, the table supports the respondent's response on preference of internet facility that satisfaction can be a good factor or determinant and not only availability. This is shown as the percentages of satisfaction derived from each facility corresponds with those they mention as the most used and the most preferred.

Challenges Encountered in the Use of Internet for Communication and Information Sharing

To answer the last (6th) research question of the study, respondents were asked in an open ended question to state the challenges they have (if any) in using the available internet facilities for communication and information sharing. This is necessary since the theory adopted in the research listed other factors that can affect the use of technology by individuals. The challenges listed by the respondents were categorized and reported in table 4 below.
Table 4: Challenges Encountered in the Use of Internet Facilities

<table>
<thead>
<tr>
<th>CHALLENGES</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ownership of Gadgets/Technology</td>
<td>56</td>
<td>29.6%</td>
</tr>
<tr>
<td>Poor Management Practices of the System</td>
<td>158</td>
<td>83.6%</td>
</tr>
<tr>
<td>Fluctuation of Service Network</td>
<td>189</td>
<td>100%</td>
</tr>
<tr>
<td>Lack of Training</td>
<td>100</td>
<td>53%</td>
</tr>
<tr>
<td>Unsteady Power Supply</td>
<td>189</td>
<td>100%</td>
</tr>
<tr>
<td>Others</td>
<td>5</td>
<td>2.6%</td>
</tr>
</tbody>
</table>

As shown in the table, the major challenges indicated by respondents are poor management practice of systems and fluctuation of network available for information sharing. Unsteady power supply the problem of ownership/availability of gadgets such as a computer or a phone as a facility for communication and information sharing in ABUTH. These major challenges as indicated by the respondents is in line with what Richardson and Asthana, (2006); and Yang and Maxwell (2011) found in their studies. It also shows that there are a number of interrelated factors that affect information sharing between organizations, including individual and agency interpretations of policy documents and legislation; governance structures; technical factors such as compatibility of computer systems; training and support; organizational structure and culture; trust, rewards, incentives and other social factors; and individuals' beliefs about information sharing. Though other factors mentioned in their studies are not captured in the context of ABUTH by the respondents, this may be in the variation of the research methodology used. For instance, Richardson and Asthana, (2006) used interviews method of data which is more in-depth in terms of data and response while Yang and Maxwell (2011) used closed ended questions with variety of options from which the respondents were to choose from.

Summary, Conclusion and Recommendations

The focus of this study was on awareness and uses of Internet facilities for communication and information sharing in ABUTH, the research questions sought to find out the level of awareness, various type of internet facilities available and used, most preferred internet facility and the determinants for the preference and the challenges encountered by medical personnel in ABUTH on the use of internet for communication and information sharing. The study adopted descriptive survey method and distributed 200 copies of the questionnaire among the respondents stratified sampling techniques and the study got 189 questionnaires back as the response rate.

The research finding shows that the respondents are aware of the available internet facilities in ABUTH and are utilizing it for communication and information sharing for their service delivery. Emails, Intranet, Website, Intranet email, instant message and Face book were mentioned as the available and used internet facilities among the respondents with the popular email, intranet and Facebook as their most preferred facilities for communication and information sharing. The reason for the preference reported to be confidentiality, instant feedback, simplicity, access and availability. This also corresponded with the 100 percent satisfaction that the respondents reported to derived from using such facilities as email, intranet, server list and instant messaging.

Poor management practices of the system, fluctuation of network and unsteady power supply were found to be the major challenges encountered in the use of Internet facilities for communication and information sharing among the respondents (medical personnel) in ABUTH. Based on these findings therefore, the study recommends that:
1. The management of the hospital (ABUTH) should find a way of updating their internet server systems continuously and top management support to the role of Internet facilities in improving the level of information sharing within the hospital should be enhanced. From a technical perspective, the hospital management should find out and determine if the existing platforms and Internet facility sufficiently address the hospital needs or if customized development is needed.

2. More proper planning and policies should be drafted and adopted to increase the capacity of development, management and sustainability of equipment, tools and facilities that support activities of intranet usage among the staff of the hospital.

3. The management should also strengthen more on internet facilities use training among its staff especially on the available internet facilities in the hospital such as website, blogging, and social media platform for their work related communication and information sharing.

References


Wales
