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**SOCIAL MEDIA AND UTILIZATION OF INFORMATION ON
CONTAGIOUS DISEASES: THE CASE OF MEDICAL STUDENTS OF
ABIA STATE UNIVERSITY TEACHING HOSPITAL ABA**

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Abstract

This research examines social media and utilization of information on contagious diseases by medical students of Abia State University Teaching Hospital Aba. The research adopts survey design to investigate a sample of 321 medical students of ABSU Teaching Hospital who were registered undergraduates in the 2017/2018 academic session. Because the number of the students was adequate and manageable, the research adopted the census sampling technique. Structured and validated questionnaire with a reliability coefficient value of 0.81 was used to gather data for the study. Results reveal that the medical students received and made use of information on contagious diseases from six social media platforms covering causes, pattern of spread, type of people affected, effects, drug administration and strategy to avoid infection. Economic, social, infrastructural and environmental challenges impeded receipt and use of information by the students. Provision of functional computer sets with adequate cyber network in the hospital library is one of the recommendations that could ameliorate the challenges. The paper concludes that since receipt and utilization of information on contagious diseases is quick and accurate through social media platforms, quality internet services should be sustained in the medical library.

Keywords: Social media, Utilization, Information, Medical Students, Contagious Diseases

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Introduction

One of the main features that have continued to shape and radicalize access to and use of information and data in this 21st century is the social media. Seen as a set of online activities, social media promote interpersonal communication, enhances information sharing on a scale hitherto unknown to humanity, fosters cooperation among online users and above all break the limitations of geography in information availability and utilization (Aschroft and Watts, 2005). Social media have become an ubiquitous worldwide occurrence with over two-thirds of global adult users being active on social networking sites.(Xie and Stevenson, 2014). They have become so influencing on information access that Kaplan and Haenlein (2010) describe social media as that group of the web -based foundations of the web 2.0 that allow unmitigated design and interchange of user generated content.

For instance, Facebook is an evolutionary technology of the 21st century that has changed social relationships, provides opportunity for individuals to share their ideas and opinions, establishes and maintains relationship with others (Elgendi, 2015). YouTube on the hand is a video sharing platform that is increasingly used to share and disseminate health- related information particularly among young people. From its inception in 2005, YouTube has provided a platform for more than 2 billion chip viewing everyday (YouTube.com, 2016). Instagram is also a social media outlet where individual users, organizations, vendors and businesses post their photos and report other pictures to their followers using hashtags to pick related posts with the same hashtags (Digital Marketing Ramblings, 2014). WhatsApp, WeChat, LinkedIn and other social media platforms that are increasingly contributing to global information sharing although at different dimensions and configuration.

One of the major areas where social media has had critical impact is in the area of health information provision, access, management and utilization. Jones (2011), Merchant, Elmer and Lurie (2011) remark that health institutions and organizations have shown great interest in the efficacy of social media to disseminate health – related news to the people. Thackeray, Nieger, Smith and Van wagenen (2012) agree but add that the efficacy of social media in the use of critical medical data flourishes more in the developed countries of the world. In other words, these authors are concerned whether the developing countries in Africa have cued into the social media family in the dissemination of health information, particularly among medical students. It is this kind of view that makes this research much more germane because of the need to establish and clear doubts on the use of social media on health information in Nigeria, using medical students of Abia State University Teaching Hospital Aba as a focal point.

The problem

In spite of the popularity and use of social media platforms in all aspects of human activities, it is still doubtful if this popularity and use in information acquisition and sharing exist among medical students of Abia State University Teaching Hospital, Aba. This seems to be the

position when viewed against the backdrop of available literature on the use of social media on health information management where the focus has been mainly on other institutions and students in other parts of Nigeria and other parts of the world other than medical students of the Abia State University Teaching Hospital, Aba (Annabel and Kennedy, 2010; Rabee et al, 2015; Semithelkunia and Shastric, 2017, Elgendi, 2015). Apart from this, other research have focused on different kinds of health information and related matters other than contagious diseases (Thackeray, Nieger, Smith and Van Wagenen, 2012; Tang, Bie, Park and Zhi, 2018, Mandeville, Harris and Seng, 2014). As a result of this lacuna, there is conflicting opinions on whether the medical students of Abia State University Teaching Hospital actually make use of social media with regards to contagious diseases such as Polio, Cholera, Measles, Chicken Pox, Whooping cough, HIV/AIDs, Hepatitis, Lassa fever, Tuberculosis and the like. This research therefore intends to eliminate this uncertainty by investigating on the use of social media on contagious diseases by medical students of Abia State University Teaching Hospital, Aba.

Research objectives

This research is set out to provide answers to the following objectives:

- i. To establish the type of contagious diseases which medical students of Abia State University teaching hospital Aba obtain from social media platforms.
- ii. To determine the social media platforms from which the students obtain and use information on contagious diseases.
- iii. To find out the nature of information on contagious diseases that are received and made use of by medical students in Abia State University teaching hospital Aba;
- iv. To ascertain the skills that medical students have acquired which equipped them to receive and make use of information on contagious diseases.
- v. To identify the challenges and possible solutions to the receipt and use of information on contagious diseases.

Literature Review

Social media is broad and continually evolving. The term refers to the Internet-based tools that allow individuals and communities to gather and communicate; to share information, ideas, personal messages, images, and other contents and in some cases to collaborate with other users in real time. Hansen, Schneiderman, and Smith (2011), posit that social media refers to a set of online tools that are designed for and centered around social interaction. For instance Facebook is an evolving technology of the 21st century that has changed social relationships; provides an opening for peoples to share their ideas and opinions, and establishes and maintains relationships with others. It allows a user to create a profile, display personal information, upload pictures, accesses other users profile, accumulate friends and interacts with friends via messages and gifts (Elgendi, 2015). Annabell and Kennedy (2010) in their study, captioned "Medical students' use of Facebook to support learning: insights from four case studies" adopted a mixed – methods for the study, and found out that 25% of medical students used Facebook to support

learning, to facilitate examination revision, sharing resources, supporting tutorial group learning and keeping in touch throughout studies.

Fourtassi, Khannoussi, and Hajjiour (2014) examined the use of Facebook for teaching and learning by an enrollment class of around 250 undergraduate medical students who were invited to “like” a Facebook page that was dedicated to communicating with the lecturer if any questions should arise during later revision lessons. The research found out that in the Faculty of Medicine of Oujda, Facebook is widely used by medical students as their primary communication tool. They used it to exchange information about courses, teachers, and examinations, share notes, answer each other’s questions and queries and give advice to younger fellows. Al-Dubai, Ganasegeran, Al-shagga, Yadav, and Arokiasamy(2013) citing Gafni and Deri (2012) reveal from recent study in the US, that up to 96% of medical students regularly use Facebook and that the use of social networking sites is increasing extensively in the field of medical education and has gained substantial interest among educators and institutions.

YouTube is a highly practical teaching tool that is not limited by time or place unlike books, lectures, and tutorials with over half of viewings done on handheld mobile devices. It has been used to teach preschool learners through to graduate level and beyond. Nagpal, Karimianpour, Mukhija, Mohan and Brateanu (2015) opine that people use resources such as YouTube to understand medical symptoms of a disease rather than prevalence, outcomes and other characteristics of the disease, and advocating that video producers need to assign more video time on the discussion of medical symptoms. Azer (2014) compared the content of textbooks, emedicine articles, and YouTube on the cardiovascular procedures, and found that YouTube transcends not only on the user interface front but also regarding content and intermingling of information across a molecular and clinical level. He found out that YouTube offered up-to-date and digestible educational resources to medical students, with a bonus feature of interactivity between users via the promotion of user comments and feedback.

Instagram is a social media outlet with users made up of individuals, organizations, vendors, and businesses, which post their photos and repost other images to their followers. “Hashtags” are used as subjects for the post, providing a link to related posts with the same “hashtag” (Karimkhani, Connet, Boyers, Quest and Dellavalle, 2014). According to Boulos, Giustini and Wheeler (2016) Instagram’s uses are mainly educational, informational and motivational or supportive. This app has great possibilities to serve as a social networking platform in visually rich disciplines such as clinical dermatology, clinical infectious diseases and radiology owing to its strong albeit not unique, photo sharing affordances. Gauthier and Spence (2015) provide a non-exhaustive list of Instagram accounts that may be of interest to the infectious diseases community. The authors also reveal that with its user demographics, growing popularity, and frequent use engagement, Instagram has excellent potential to be utilized as a mechanism for raising awareness, establishing interprofessional collaborations and providing education to future health care providers, current health care providers, and the general public.

The research by Odu and Omosigho (2017), Xie and Stevenson (2014), Asogwa, Ugwu and Idoko (2015), Ani, Edem and Attiong (2010) have revealed the efficacy of social media platforms and other ICT resources in information sharing among a variety of people across the globe. It is therefore not out of place to reason that social media could be an enhancing media for information gathering and utilization by medical students even though that of the students of Abia State University Teaching Hospital still remains unestablished empirically.

Methodology

This research is survey in nature but adopts ex post facto research design to investigate the total population of 321 medical students of Abia State University Teaching Hospital, Aba who are currently registered in the 2017/2018 academic session. The students cut across all levels of undergraduate category. Ex post facto research design is considered more appropriate for this study because the variables under examination namely, “social media and utilization” have already taken place. In other words, social media facilities and their utilization by medical students have already taken place and that makes ex post facto research design more appropriate than exploratory survey. A structured and validated questionnaire with reliability coefficient of 0.81 was used to gather data from medical students. Apart from section A of the questionnaire which contains open- ended questions, all other sections of the questionnaire contain questions that are close- ended.

Results and discussion

A total of 321 copies of the questionnaire were administered on the medical students of the Abia State University teaching Hospital, Aba. Out of this number, 294 copies were returned representing 92%. The 294copies were also found useful and therefore data analysis was based on this 294 copies. The remaining unreturned copies totaling 27 or 8% according to enquiries was because students were sent on hospital experience outside the school and therefore could not be reached at the time of the collection of the questionnaire.

Table I below indicates that majority of the medical students, 162 representing 55% were females as against 132 or 45% who were males. This is a reflection of the decreasing interest of males in Nigeria towards education and medical field in particular and thus justifies the concerns of Owen (2019) and Boyo (2019) that the rate at which women are dominating Nigeria’s tertiary education sector is reversing the belief that Nigeria is a male dominated society. It also confirms the fears of Sobowale (2019) that the exodus of Nigerian youths to other African countries will put the future of literacy among the youths in serious jeopardy. On the levels of the study of the students as also shown in Table I, the levels show a decreasing trend as the students’ progress on the training ladder. Those in 100 level were 73 or 25% and decreased to 62 or 21% in 200 level, down to 58 or 20% in 300 level and moved downwards to 53 or 18% and then 48 or 16% in 500 levels.

Table 1. Demographic data of the medical students

Gender	Responses	Percentage
Male	132	45%
Female	162	55%
Total	294	100%
Levels		
100	73	25%
200	62	21%
300	58	20%
400	53	18%
500	48	16%
Total	294	100%

The medical students of the Abia State University Teaching Hospital, Aba, were found to have utilized social media platforms such as YouTube, WhatsApp, Facebook, Instagram and LinkedIn and the like to receive information on six categories of contagious diseases which affect human life. These categories refer to those that attack the respiratory system in humans, those that attack the human skins and related parts, and those that attack the intestinal organs, those that affect the human immune system and those that cause human paralysis involving the legs mainly and those that inhibit the human digestive system. According to Table 2, information received through the social media on these contagious diseases that attack and destroy the human digestive system constitute more than 21% and they were news on Ebola disease (186 or 12.7%), Lassa fever (199 or 13.6%) and Hepatitis “B” (111 or 7.6%). Category 2 is those diseases that attack the human immune system. It makes 20% of the information received from social media; an example is the HIV/AIDs which recorded 291 responses representing (20.0%). Category 3 refers to the contagious diseases that affect the human respiratory system. It constitutes more than 19% of the information received by the students. The diseases include Tuberculosis (105 or 7.2%), Whooping Cough (67 or 4.6%), Common cold (47 or 3.2%) and Flu (66 or 4.5%). Category 4 represents those contagious diseases that affect the skin part of the body. They constitute 6.7% of the information the students receive from social media. These diseases include Measles/ Chicken pox (98 or 6.7%). Category 5 refers to those that affect the intestinal part of the body and cause frequent stooling. They constitute more than 6% of the news the students receive via social media. They include Cholera and Diarrhea (101 or 6.9%). They sixth category refers to those diseases that can cause human paralysis affecting the limbs of a person. It includes Polio (190 or 13.0%). The revelation from this analysis confirm the positions of Khanousi and Hajjiour (2014) and Gauthier and Spence that social media platforms have become vital source of all types of information to various categories of people and that their use in gathering information cut across all types of information and data. It also agrees with the opinion of Annabel and Kennedy (2010) that the use of social media has gone beyond mere acquisition but

also supports learning and research among both students and professionals. It is therefore not out of place to state that social media has become a very good source where the medical students of the Abia State University Teaching Hospital, Aba resort to in order to acquire critical information on the nature, spread and causes of contagious diseases.

Table 2. Type of contagious diseases students received information from social media

Category	Nature of Contagious Diseases	Responses	Percentage
Digestive System	a. Ebola	186	12.7
	b. Lassa Fever	199	13.6
	c. Hepatitis “B”	111	7.6
Immune System	HIV/AIDs	291	20.0
Respiratory System	a. Tuberculosis	105	7.2
	b. Whooping cough	67	4.6
	c. Common cold	47	3.2
	d. Flu	66	4.5
Skin Disease	a. Measles	53	3.6
	b. Chicken pox	45	3.1
Intestinal Disease	a. Cholera	77	5.3
	b. Diarrhea	24	1.6
Human Paralysis	Polio	190	13.0
	Total	1461	100

Majority of the medical students, 209 or 23.9% indicated that they received and made use of contagious diseases information from YouTube. This may not be unconnected with the fact that YouTube as a social media provides the users both information and pictures of affected persons as the case may be. WhatsApp was the source to 194 or 22.1% of the students even as Facebook which seems to be very popular among Nigerians came third in ranking of the users as it recorded 158 or 18.1% response rate. Other social media platforms which the students made use of include LinkedIn (88 or 10.1%), WeChat (77 or 8.8%), 2go (81 or 9.3%) and at a less use, Instagram which recorded least responses (67 or 7.7%), an indication that it is less useful or has less appeal to the medical students to receive and make use of information on the contagious diseases. See Table 3

Table 3: Social media platforms which medical Students Received and utilized information on contagious diseases.

S/N	Nature of Social Media	Responses	Percentage
A	WhatsApp	194	22.1
B	LinkedIn	88	10.1
C	Facebook	158	18.1
D	WeChat	77	8.8
E	YouTube	209	23.9
F	Instagram	67	7.7
G	2go	81	9.3
	Total	874	100

Result reveal that the medical students received six types of information on the contagious diseases from social media platforms. The categories of information range from the causes of the disease, location where the outbreak is found, types of drug to be administered and surveillance, people most affected and monitoring/outbreak of the disease. According to Table 4, the most frequent information on the contagious diseases received and utilized by the medical students is in the area of the cause of the outbreak of the disease (201 or 14.5%). This is followed by the news on the outbreak of any contagious disease (197 or 14.2%); information on the cure or the type of drug to administer to any infected person comes third (186 or 13.4%). Other information received by the students include those that tell them the pattern of the spread of the disease (130 or 9.4%), location or place where the outbreak occurred (112 or 8.1%); how to avoid being infected (110 or 7.9%) and to keep vigilance (surveillance) on the outbreak (86 or 6.2%). This revelation justifies the opinion of Chukwu (2018) that most medical professionals in Nigeria now resort to the internet to receive and use additional information on medical facts relating to diseases and modern medicine. It also justifies the outcomes of the research by Mandeville, Harris and Seng (2014) and Tiang, Bie, Park and Zhi (2018) that social media sites have become huge assets for medical professionals to receive and make use of information on all manner of contagious diseases including monitoring and control of the outbreak. It is therefore reasonable to state that social media have assisted humanity immensely in controlling very deadly diseases through their provision and use of reliable, accurate and timely information to medical experts, and even professionals in - training like the Abia State University Teaching Hospital, Aba. See Table 4

Table 4: Type of information on contagious diseases received and utilized by Medical Students of ABSU

S/N	Type of information on contagious diseases received and utilized by Medical Students	Responses	Percentage
a	Outbreak of disease	197	14.2
b	Nature and location of the outbreak	112	8.1
c	Cause of the outbreak	201	145
d	Pattern of infection/spread	130	9.4
e	How to avoid infection	110	7.9
f	How to sustain surveillance	86	6.2
g	Drug administration/control	186	13.4
h	How to respond to emergency	66	4.7
i	Type of people most affected	120	8.6
j	Effects on people	113	8.1
k	Feedback from the people treated/affected	70	5.0
	Total	1391	100

The medical students were found to have acquired reasonable digital skills which helped them receive and make use of information on contagious diseases. The ICT skills range from those which facilitated accessibility, identification, retrieval, storage and information sharing capabilities. For instance, 198 of them representing 16.4% had acquired the skill to download information online, 196 or 16.2% had the skill to transfer file (information transfer) from one online source to another, 186 or 15.4% had to retrieval of data online even as 177 or 14.7%, 145 or 12.0% and 121 or 10.0% had the skill to upload information, surf the internet and store data respectively. This finding justifies the views of Xie and Stevenson that digital skills in the use of social media have become critically necessary if people including medical students are to make use of abundant online information in the 21st century. It also corroborates the findings of Odu and Omosigho (2017) and Ani, Edem and Ottong (2010) that digital competence especially the skills to search information online, retrieve, store, evaluate and transfer information are necessary for effective utilization of digital resources which have increasingly become part of the the 21st century resources and services, and as such those who lack digital skills will continue to lag behind in this information and communication technology age where digital competence has become the order of the day. See Table 5

Table 5: ICT skills possessed by the students for use of information on contagious diseases.

S/N	ICT Skills	Responses	Percentage
a	Surf of the cyber	145	12.0
b	Data/ Information evaluation	98	8.1
c	Data/ Information storage	121	10.0
d	Downloading	198	16.4
e	Uploading	177	14.7
f	Retrieval	186	15.4
g	File transfer	196	16.2
h	Printing of information	86	7.2
	Total	1207	100

Some economic, social, environmental and infrastructural challenges were found to have impeded effective utilization of information on contagious diseases by the medical students. Majority of the students totalling 194 or 20.7% indicated that their major challenge was poor internet network which made access to and use of the required information online very hard, another large number of the students numbering 187 or 19.9% indicated that their own constraint arose from delay in system response to instructions. 121 or 12.8% stated that theirs arose from frequent power interruptions from the stand - by generators to the public power supply (NEPA) even as 101 or 10.7%, 86 or 9.2% and 72 or 7.7% stated that their own challenges came from few computers on campus to serve the students, frequent system hang – up, cost of using commercial business centres where internet exists are deplorable road system around the campus vicinity. These challenges limited the timeliness of information access and retrieval online but did not frustrate totally their use of information on contagious diseases. See Table 6

Table 6: Challenges facing students in their use of information from social media.

S/N	Challenges	Response	Percentage
A	Poor network	194	20.7
B	Delay in system response to instruction	187	19.9
C	Frequent system hang -up	86	9.2
D	Few computers available for use in the hospital library	101	10.7
E	Distance from residence to the location of commercial cyber café	92	9.8
F	Frequent power interruption	121	12.8
G	Cost of using public cyber cafe	86	9.2
H	Bad road network	72	7.7
	Total	939	100

Conclusion

This research has eloquently established that while social media platforms are used by medical professionals in other parts of the world, they are also used in Nigeria by health experts like the medical students of the Abia State University Teaching Hospital, Aba. It is therefore not out of place to state that social media platforms such as YouTube, Facebook, WhatsApp and the like have become great assets in the use of information on contagious diseases. This is against the backdrop of the opinion of some Nigerians on the negativities of social media platforms in information access and use (Dickson, 2019). The paper recommends that the authorities of Abia State University Teaching Hospital, Aba should endeavour to provide adequate computer systems with good internet networks so as to ameliorate the hardships the students are currently facing in their efforts to acquire and make use of online information on contagious diseases.

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