Journal of Library and Information Sciences
December 2017, Volume 5, Number 1 & 2, pp. 1-4
ISSN 2374-2372 (Print) 2374-2364 (Online)

Published by American Research Institute for Policy Development
DOI: 10.15640/jlis.v5n1-2a1
URL: https://doi.org/10.15640/jlis.v5n1-2a1

Utilization of Information on Contagious Diseases through Twitter by Medical Students in Teaching Hospitals: A Case of Abia and Imo States.

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Abstract

Medical students of Abia and Imo States University teaching hospitals are believed not to be influenced by Twitter in the utilization of information on contagious diseases. To ascertain if they receive information on contagious diseases through Twitter formsthe bases for this survey. Thesurvey research methodwas adopted to studya population of 709 medical students of the two teaching hospitals under study. Structured questionnaires were used to collect information used for the analysis. Information was provided for the students to determine their level of agreement and the result shows that Twitter provides medical students with information on the pattern of the infection/ spread, information on how to avoid contracting an infection, It gives them news on the outbreak of contagious diseases and others. The paper, therefore, concludes that Twitter influences medical student's utilization of information on infectious diseases.

Keywords: Twitter, Information, Utilization, Medical students, Contagious, Diseases

Introduction

The advent of digital technology has had a transformational impact on everyday life and business. Exponential growth in the use of the internet, social media and apps as well as the use of personal computers, smartphones, and tablets by all class of people including students In tertiary institutions is well documented (Altken,2014). Notably, the advent of these sources of information of which Twitter is one of them has led to a new challenge in the utilization of information.Twitter is considered an information network that connects users with topics and discussions that are relevant and useful to them. The user can post informational "tweets" consisting of 140 characters in length or less with the aid a computer or mobile device connected to the Internet and the Twitter network (twitter.com, 2011). Jack Dorsey, Evan Williams, and Biz Stone in 2006invented Twitter as a faster means of staying in touch (Sauerbier, 2010).

In the opinion of Nagpal, Karimianpour, Mukhija, Mohan and Brateanu (2015) people use sites such as Twitter to better comprehend clinical indications of a disease rather than frequency, outcomes and other features of the disease, and proposing that video producers need to assign more video time on the discussion of clinical symptoms.In the light of the above situation, thisstudy, therefore, seeks to investigate the influence of Twitter on the utilization of information on contagious diseases by medical students in teaching hospitals in Imo and Abia States.

Statement of the problem

The use of Twitter plays different roles in education which include providing students opportunity to share their ideas as well as allowing them to collaborate with others. It is believed that Twitter has become an integral part of the students of which medical students are part of. Be that as it may, this assumption may not apply to the medical students in teaching hospitals in Abia and Imo States as regards utilization of information on contagious diseases such as polio, cholera, measles, common cold, whooping cough, HIV/AIDS, hepatitis, tuberculosis and Lassa fever as there is hardly any empirical evidence to prove otherwise. As available researchers such as Giordano and Giordano (2011) and Redfern, et al. (2013) applies to healthcare providers and health information and education.

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Hence any assumption on the utilization of information through Twitter by medical students on contagious diseases in teaching hospitals in Abia and the Imo States remains speculative and guesswork.This is the focus of this study.

Objectives of the study

i. Determine the type of contagious diseases information which medical students in teaching hospitals obtain from Twitter.
ii. Find out the influence of Twitter on the utilization of information on contagious diseases by medical students in teaching hospitals under study.

Literature Review

Twitter initially utilized for a journalistic effort, serves as a channel for breaking a news story but celebrities later familiarized it by using it to tweet events of their daily lives.According to Rockinson-Szapkiw & Szapkiw (2011), Twitter provides an information sheet that displays detailed information on specific tweets when desired by a twitter user. Twitter which started as a means for users to connect with family, acquaintances, and friends, on an informal basis, has expanded to more regular users to include business and education. Melvin and Chan (2014), remark that Twitter provides an immediate means of efficiently accessing current information for as much as little time as the clinician can spare, consider the meaning of a "community of practice again" as residents and faculty engage with others worldwide.

Giordano and Giordano (2011), report that Twitter has become a primary source of information sharing for healthcare providers even as Redfern et al. (2013) confirm of the increasing dissemination of health information and education globally through Twitter. Kostkova, Szomszo, and Louis (2014) reveal that Twitter has revolutionized information creation, distribution, sharing and management for public health needs even as Lee (2014) opines that Twitter helped the world watch the tragedy of Ebola as it unfolded, by connecting people around the world with each other on social media to study and learn about this disease in real time.

Lampose and Cristianini (2010) and Szomszor (2010) posit that Twitter can be used to both track and predict the spread of contagious diseases and could also be a useful data source to detect, observe and manage public health events and disease outbreaks.Today Twitter is a promising new data source for Internet-based surveillance because of the volume of messages including their frequency and public availability; Twitter is also affordable and swifter than having thousands of healthcare providers and hospitals fill out forms each week (Culotta, 2010).

According to the University of California Health Sciences (2014), Twitter could be used to track HIV incidence and drug-relatedbehaviours with the aim of detecting and potentially preventing outbreaks, predict sexual risks and drug use behaviours and also to monitor data on geographical distribution of HIV cases. The volume of HealthMap news media reports and cholera-related Twitter posts were equated to official Haiti Cholera Case accounts during the first 100 days of the 2010 outbreak according to a study by Chunara, Andrews, and Brownstein (2013),. A survey by Gomide et al. (2011) reveals that there is a correlation between Twitter posts in Brazil and dengue outbreaks. However, they report that only 40% of tweets included location with limited spatial analysis.

In the 2009 HINI pandemic, Szomszor, Kostkova and de Quincey (2010) found out that health communication via Twitter feeds and trusted news organizations were most efficient in contacting the public; however, timeliness of health information may not directly change to site popularity among these trusted sources.

Methodology

Survey research design was used in this study. The population of the study is 709 medical students of the two teaching hospitals under investigation. The questionnaire was used in collecting data for the research while Mean values and standard deviation were used in analyzing the research questions.

Data analysis and discussion of findings

Out of the 709 questionnaires distributed, 604 were returned showing a response rate of 85%. 105 copies (15%) were not returned. Eleven kinds of contagious diseases were provided for the medical students to indicate which of them the receive information on through Twitter. See Table 1. it shows that 431 medical students receive information about Flu through Twitter, On Polio 460. To ascertain whether the receive information about cholera through Twitter, 416 indicated yes On Measles, 426reported yes to its usage through Twitter.

As to whether the receive information on common cold through Twitter, 384 agreed to that. In the area ofwhooping cough, 394 indicated yes. As to whether the receive information on Tuberculosis through Twitter, 359 were positive. On HIV/AIDs, 373reported yes to its usage through Twitter. On whether the receive information on Hepatitis "B" through these Twitter, 442 said yes. In the area of Lassa fever, 446 agreed to its usage. To ascertain whether the receive information on Ebola through Twitter, 440 indicated that they use it to get information on Ebola.

Table 1: kinds of contagious diseases information medical students in teaching hospitals in Abia and Imo States receive as a result of their use of Twitter?

Contagious diseases	Yes	No	Total
Flu	431	173	604
Polio	460	144	604
Cholera	416	188	604
Measles	426	178	604
Common Cold	384	220	604
Whooping Cough	394	210	604
Tuberculosis	359	245	604
HIV/AIDS	373	231	604
Hepatitis "B"	442	162	604
Lassa Fever	446	158	604
Ebola	440	164	604

Twitter according to Table 2 relates to utilization of information on the contagious disease by medical students in seven main areas. These are that it gives them news on the outbreak of contagious diseases(x=2.90).It gives them information on the nature and location of an outbreak (x=2.62); it gives them information on the cause of the outbreak (x=2.50); it provides them with information on the pattern of an infection/ spread (x=2.68).It gives them information on how to avoid contacting an infection (x=2.76); it provides them with information to improve surveillance on the outbreak of contagious disease (x=2.71), and it provides them with information on the type of people most affected (x=2.84).However, the study found out that it does not give them information on the cure/drug to apply for a contagious disease, it does not give them information on how to respond to emergencies.It does not give them information on its effect on people and society and finally does not enable them to get a response from people and society about an outbreak as their mean scores are below the significant mean value of 2.44.

Table 2: Mean values of influence of Twitter on utilization of information on contagious diseases by medical students in teaching hospitals under study

S/N	**Twitter on utilization of information on contagious diseases**	SD	D	A	SA	Total	Standard deviation	Mean Score
a	It gives me news on outbreak of contagious diseases	28	145	353	78	604	142.94	2.80
b	It gives me information on the nature and location of an outbreak	27	117	391	69	604	164.17	2.62
c	It gives me information on the cause of the outbreak	26	162	353	63	604	146.39	2.50
d	It provides me with information on the pattern of the infection/ spread	31	147	348	78	604	139.71	2.68
e	It gives me information on how to avoid contacting an infection	33	187	303	81	604	120.03	2.76
f	It provides me with information on how to improve surveillance on outbreak of contagious diseases	39	171	328	66	604	131.02	2.71
g	It gives me information on the cure/ drug to apply for a contagious disease	73	172	313	46	604	120.82	2.47
h	It provides me with information on how to respond on emergencies	50	181	331	42	604	135.87	2.30
i	It provides me information on the type of people mostly affected	28	134	297	145	604	110.71	2.84
j	It provides me with information on its effect on people and society	29	129	269	177	604	99.95	1.65
k	It enables me toget responses from people and society about an outbreak	29	135	279	161	604	102.67	1.56
	Significant mean value							2.44

Conclusion

This study has established Twitter a useful source of information utilization by medical students in teaching hospitals in Abia and Imo States on contagious diseases. Evidence has shown that Twitter aids medical students in the utilization of information on contagious diseases as the findings reveal that they receive information on the pattern of the infection/ spread, information on how to avoid contracting an infection and others. The result of the finding agrees with the report of Giordano and Giordano (2011) that Twitter has become a primary source of information sharing for healthcare providers even as Redfern et al. (2013) confirms the increasing dissemination of health information and education globally through Twitter.

References

Altken, M., Altmann, T., & Rosen, D. (2014).Engaging patients through social media. Accessed from www.theimsinstitute.org

Chunara, R., Andrews, J.R., & Brownstein, J.S. (2013).Social and news media enable estimation of epidemiological patterns early in the 2010 Haitian cholera outbreak.*American Journal of Tropical Medicine and Hygiene.*86(1): 39–45.Retrieved from doi:10.4269/ajtmh.2012.11-0597.pmid:22232449.

Culotta, A. (2010). Towards detecting influenza epidemics by analyzing twitter messages. In Proceedings of the 1st Workshop on Social Media Analytics, 115–122.

Giordano, C., & Giordano, C. (2011).Health professions students' use of social media. *Journal of Allied Health,* 40(2), 78-81.

Gomide, J., Veloso, A., Meira, W., Almeida, V., Benevenuto, F., Ferraz, F., & Teixeira, M. (2011). Dengue surveillance based on a computational model of spatiotemporal locality of twitter. In Proceedings of the 3rd International Web Science Conference.

Kostkova, P., Szomszor, M., & Louis, C.S.T. (2014).The use of Twitter as an early warning and risk communication tool in the 2009 Swine Flu pandemic. *ACM Transactions on Management Information Systems, 5(2),1-25.*

Lampos, V., &Cristianini, N. *(*2010).Tracking the flu pandemic by monitoring the social web.*In Proceedings of the 2nd IAPR Workshop on cognitive information processing (CIP'10).411–416.*

Lee, T.M. (2014). CDC, Ebola, and Tweet chat: was this venue a success. Available at: http://www.symplur.com/blog/cdc-ebola-tweet-chats-success/.

Nagpal, S.J.S., Karimianpour, A., Mukhija, D., Mohan, D.&Brateanu, A (2015).YouTube videos as a source of medical information during the Ebola hemorrhagic fever epidemic.4,457 DOI 10.1186/s40064-015-1251-9.

Redfern, J., Ingles, J., Neubeck, L., Johnston, S. & Semsarian, C. (2013)Tweeting our way to cardiovascular health. *Journal of the American College of Cardiology,* 61(15),1657-1658

Rockinson-Szapkiw, A.J., &Szapkiw, M. (2011).Engaging higher Education Students Using Twitter. Retrieved from http://digitalcommons.liberty.edu/cgi/viewcontent.cgi?article=1205&context=educ_fac_pubs.

Sauerbier, R. A. (2010).Social networking.In Grant, A.E., & Meadows, J.H. (eds.). Communications technology update and fundamentals. Burlington, Massachusetts: *Focal Press*.292-304

Szomszor, M., Kostkova, P., & de Quincey, E. (2010). Twitter predicts swine flu outbreak in 2009. In Szomszor, M., and Kostkova,P.(eds). Proceedings of the 3rd international conference on electronic healthcare, Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 69, Springer, 18–26

University of California Health Sciences (2014).Twitter 'big data' can be used to monitor HIV anddrug-relatedbehaviour, UCLA study shows.*newsroom.ucla.edu/releases/twitter-big-data-can-be-used-to-250162*