



Social Media and Promotion of Safe Sanitary Practices in Rivers State, Nigeria

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ABSTRACT

Background: Social media has become an integral part of modern life, influencing how people access information, interact with each other, and adopt new behaviours. In Nigeria, particularly in Rivers State, the proliferation of social media platforms presents a significant opportunity to promote safe sanitary practices and improve public health outcomes. Despite efforts by government agencies and NGOs, sanitation remains a major challenge in Rivers State, with many communities lacking access to proper waste disposal facilities, clean water, and hygiene education. The use of social media can help bridge this gap by disseminating vital information and promoting behavioural change.

Objective: This study investigated the role of social media in promoting safe sanitary practices in Rivers State, Nigeria, and identifies strategies for leveraging these platforms to improve public health outcomes.

Method: The descriptive survey research design was adopted. The population comprised of the residents of Rivers state amounting to 8,928.041. The sample size of the population was 384 according to the Krejcie and Morgan 1970 table. Data were analysed using the weighted mean scores on a four-point Likert scale.

Result: Findings show that Rivers State Ministry of Health usage of social media for safe sanitary practices was very poor. The study also found that other private health organisations utilise social media for health promotion activities than the Rivers State Ministry of health.

Result: The study found that social media platforms (Facebook, Twitter, WhatsApp, and Instagram) are widely used in Rivers State, and their usage can significantly influence sanitary practices, but this potential has not been fully explored by the government.

Conclusion: Social media is a vital tool for promoting safe sanitary practices in Rivers State, Nigeria, but has not been optimally explored.

Recommendation: Government agencies and NGOs should leverage social media platforms to disseminate sanitation and hygiene messages, and collaborate with influencers to amplify their reach.

Unique Contributions: This study provides insights into the potential of social media in promoting safe sanitary practices in a developing country context, highlighting the need for tailored strategies to maximize impact.

Key Words: Social media, Health Organisations, sanitary practices, promotion, Rivers State



INTRODUCTION

Social media or social networking sites have brought Marshall McLuhan's foretold global village to manifestation. Walkosz, Jolls and Sund (2008) state that Marshal McLuhan had envisaged a world where the linking of electronic information would create an interconnected global village through the collapsing of communication space and time, enabling people to interact on a larger scale. This has transformed the social media into a global learning place. More so, applications and hardware facilities are churned out from information and communication technology companies to cater for the growing population and needs of users. Also, information is pumped through the different channels and platforms available to consumers from the producers of information which are mostly developed countries (Pimmer, Linxen and Gröbliel (2012).

Discourses and projects on Information Technology for Development (ICT4D) or Mobile Technology for Health (mHealth) tend to be based on techno-centric and deterministic approaches where learning materials, either software or hardware, are distributed by central authorities or knowledge is "delivered" according to "push-strategies". Using the words of Talley (2014), information is pumped through the infrastructure, often in "educationally naïve" ways (in press). Talley further observes that the main direction of techno-centric and transmissional approaches appears to be from developed to "developing" countries, respectively, from experts to novices (p. 727). Through this sharing practice, developing nations are able to learn from the developed nations, while developed nations interact directly with members of developing nations, thereby, skipping the traditional gatekeepers. Similarly, Mhunpiew and Purayidathil (2015) opine that humans are driven with the need to seek and share knowledge, making them learners. According them, people source for the necessary information either to satisfy a curiosity or any other reason; once this information has been found, it is expected that one shares the information with people around one's domain.

Consequently, health organisations utilise social media as an effective way to expand their reach, increase access to credible, science based health messages (Ndumbe-Eyoh & Mazzucco, 2016). Levac and O'Sullivan (2010) inform that social media is a promotional tool for health. It fosters accessibility, engagement, empowerment, interaction, and customisation and can also be harnessed for a more inclusive health campaign on safe sanitary and health practices. Menoza-Herrera, Valero-Morales, Ocampo-grenados, Reyes-Morales, Arce-Amare and Barquera (2020) opine that social media adoption by health organisations can influence behaviours and improve people's lifestyle, thus, leading to better health. According to Griggs (2019), government ministries and agencies use social media to explain policies, propagate campaigns and showcase their activities to the public and the world. In the Nigerian context, social media has been used to keep up with the occurrences around the world by the citizens (Obi-Ani, Anikwenze & Isiani 2020).

On September 25, 2015, 193 leaders of the United Nations General Assembly met at United Nations Sustainable Development Summit in New York City, United Sates and adopted the 2030 Agenda entitled 'Transforming our World: The Agenda for Sustainable Development (Ghorbani, 2020). The Agenda was made up of 92 paragraphs and 17 Sustainable Development



Goals (SDG). The 17 goals are in this order respectively: No poverty, No hunger, Good health and well-being, Quality education, Gender Equality, Clean water and sanitation, Affordable and clean energy, Decent work and economic growth, Industry, innovation and infrastructure, Reduced inequalities, Sustainable cities and communities, Responsible consumption and production, Climate action, Life below water, Life on land, Peace, justice and strong institutions, and Partnership for the goal.

Goal 6 which focuses on attaining clean water and sanitation for all before 2030 is in line with the aims and objectives of this study. According to the United Nations Development Programme (n.d), worldwide, 6 out of 10 people lack safely managed sanitation services. Safe drinking water and hygienic toilets protect people from diseases and enable societies to be more productive economically. When people are not exposed to safe hygienic practices, it can lead to disruption in the workplace and school which is critical to successful education and employment. Therefore, toilets in schools and work places are specifically mentioned as a target to measure. Kauppi (2015) avers that promoting safe sanitary practices in communities is a formidable task that can be surmounted through change in human behaviour and health promotion. This affirms the fact that health promotion improves the health status of individuals, communities and the nation as well as quality of life for all people. Most of the health problems are preventable and the solution lies in behavioural changes. In order to educate the masses of preventive measures against the diseases; Education, access to information and peer to peer learning are capable of promoting health messages while lack of access to information, poor services may hamper a change in behaviour to safe sanitary practices to improve health.

The situation is calamitous in rural communities as there is a lack of understanding of safe sanitary practices. According to Nkwocha, Pat-Mbano and Okeoma (2012) only a negligible 29% of rural communities have access to safe sanitation. These dismal situations put rural dwellers at risks as 17% of deaths in rural communities are as a result of consumption of unsafe water and poor hygiene (WHO/UNICEF Joint Monitoring Programme, 2010). Okafo and Nwude (2016) opines that the sanitation practices in Nigeria is below world standard and worse in the riverine communities of which are majorly found in the southern part of the country where open defecation is the given norm. The impact of this open defecation is compounded with the fact that these water bodies serve as both a source of drinking water as well as faeces dump. Thus the same water embodying an assemble of pathogenic viruses, bacteria, protozoa and helminths which are principal means for transmission and spread of a wide range of communicable diseases is the same water used for consumption purposes posing an imminent threat to the lives of members of these communities.

Nigeria is classified as a developing country due to the rate of poverty and underdevelopment (Aderounmu, Azuh, Onanuga, Oluwatomisin, Ebenezer, Azuh & Amoo, 2021). Both rural and urban communities are at risks of such diseases due to their peculiar challenges stated already and it is imperative that the necessary information is given to these communities. Social media's ability to break the barriers of distance, time and indeed, language and its ability at converging



several media forms in message presentation makes it a medium to be considered in carrying out this herculean task. Its potentiality in turning communication into an interactive dialogue where feedback is almost immediate and there is an inclusion of audio, visual and textual content enables it to fulfil the communication function of informing, educating and promoting these necessary safe sanitary practices. Baruah (2012) opines that social media is media for social interaction allowing people from different environment to share knowledge and culture. Therefore, this study investigates how social media is used to promote safe sanitary practices in Rivers State.

STATEMENT OF THE PROBLEM

Rivers State is marked with high economic activities with commensurate waste generation. The activity of the oil and gas industry has made the state a dump site for all manner of chemical pollution. The contamination of water bodies in the riverine areas of the state raises grave concern. These water bodies are all directly linked and thus any issue raised in one part of the state will affect the entire state. In rural communities where there is a lack of access to the water cistern system of toilets and so directly dump their wastes into the water bodies not minding the fact that these water bodies' serve as a source of livelihood (fishing) and water supply for members of their communities and these products are sold and consumed in the cities as well. In addition to waste dumping, lack of access to safe and clean water, there is also the issue of hygienic practices such as washing of hands after using the latrine, before and after a meal., proper disposal of household waste, and so many sanitary practices that can mitigate the springing up of and spread of diseases in the state.

Despite the importance of safe sanitary practices in preventing disease outbreaks, as underscored by the COVID-19 pandemic, there is a dearth of research on the role of social media in promoting behavioural change and awareness about hygiene and sanitation in Rivers State. Existing studies have focused on the health impacts of poor sanitation, but few have explored the potential of social media as a tool for promoting safe sanitary practices, particularly in rural communities. Attempt at filling this knowledge gap has prompted this study.

OBJECTIVES

The following were the objectives of this study:

- i. Investigate the use of social media to promote safe sanitary practices by Rivers State Ministry of Health
- ii. Identify the forms of communication such as texts, cartoons, videos and audios used on social media for health-based messages on safe sanitary practices by Rivers State Ministry of Health
- iii. Evaluate the reactions of residents of Rivers State to social media messages on safe sanitary practices from the Rivers State Ministry of Health



THEORETICAL FRAMEWORK

The study is anchored on the technology determinism theory. The technology determinism theory as espoused by Marshall McLuhan in 1962 expresses the idea that media technology shapes how individuals in a society think, feel, act, and how the society operates as they move from one technological age to another. Suggesting that people are continuously shaped by the medium they use. Technology does not just shape people's attitudes and behaviour but also introduces an innovation in the modus operandi of a social system. Thus, changing the fabric of society with each new introduction of technology. "We shape our tools and they in turn shape us" (Jan, Khan, Naz, Khan & Khan 2021). According to Marshall McLuhan, we cannot view technology content of the media separately from the technology of the medium. Thus the medium is as important as the content hence the slogan the medium is the message (McLuhan 1964; Roncallo-Dow & Scolari, 2016).

Adler (2006) opines that technology determinism is simply the idea of the important effects technology has on our lives citing an example of how the internet has revolutionised the world. For Hauer (2007) technology determinism is the belief that technology is the arch initiator or driver of society's transformation. Thus the pace of a society's transformation or growth is determined to a large extent by the existing technology of that era and society. In his locution; Internet has radically changed many aspects of not only human communication, but also the entire society's life. The rising popularity of new media has changed the nature and the way our society and the individuals act – the way we do the shopping, recruit staff, pay taxes, use the library, gain academic degrees and educate ourselves (p.1)

Thitivesa (2017) adds that in this era of digital technology, we can extend our reach to carry out campaigns that go viral and are capable of influencing the general public, government policies or to provoke a movement on a very large scale through the use of the online platform thus giving credence to the saying the medium is the message. For without the medium to enhance the capability of audience reach, the effects of the campaign will appear otherwise.

Scholars such as Raymond Williams do opine however that technology lacks the ability to shape the society and accuses McLuhan of reducing the effects of the social use of technology for which it is designed, implemented, regulated and used to a simple technological essentialism thus ratifying the existing political system (Sytaffel, Pearson, Nicholls, Wengenmeir, Chen, Phillips, Snowden, Madill, Ross, Gallagher, Fisher, Kabir, Ceuterick, Mettner, Urbano, n.d).

It is well known that the medium of communication plays an important role in the lives of members of the society as can be seen in the different stages of technological advancement and the kind of man each stage produced (Roncallo-Dow & Scolari 2016). The scholars opine that McLuhan was not concerned about what television, radio or cinema did in the literal sense but was about the type of man they produced. The way in which they modelled subjectivity while spawning that intricate background that McLuhan for lack of a better name called- a global village. Believing that after half a century, McLuhan's apothegm still holds as much water in



communication courses classrooms and it is repeated almost religiously when discussing new technologies, more than any other apothegms that are much clearer and suggestive than what McLuhan himself bestowed on us as “the medium is the message”. McLuhan’s interests were vested in the manner in which an outward reality was architecturally crafted, in ambience, in environ: this is why the medium is the message.

Thus, it can be argued that new technologies are constantly changing our behaviours and attitudes, affecting the fabric of societies (Corby, 2007; Lowe, Dwivedi & D’Alessandro 2019; Hoehe& Thibaut, 2020). From the field of medical science, to education, processes and policies of government agencies, activities of civil societies, economies and industries, every fabric of the society has felt and adapted to the presence of new technologies.

Thus, if technologies affect our lives, of which social media falls into the category of new technology, the Rivers State Ministry of Health can adapt to this new technology to promote safe sanitary practices in the state.

Empirical Review

In their study, “*Effective use of social media in public health and medicine: A systematic review of systematic reviews*”, Giustini, Ali, Fraser and Boulos (2018) examined the effective use of social media in public health and medicine. The study examined social media tools such as twitter, Facebook, YouTube, wikis and other social networking sites used in promoting awareness, create and build relationships between health practitioners and patients and so many other uses of social media in public health and medicine.

They also examined the negative and positive consequences of using social media. Although the study found out that the effectiveness of social media on health and medicine is minimal, it found out that the qualitative benefits were numerous. The study also found a range of uses for social media in the health sector such as behavioural change-management, disease prevention and management, disease surveillance, health education and communication, online learning, online reporting and symptom reporting, outbreak management, pharmacy practice and education, and professional development.

The effectiveness of social media in promoting safe sanitary practices can be traced to the advantages of social media. According to Levac and O’Sullivan (2010), people feel more connected and experience the need for support without the face to face interaction when they use social media. They suggest that social media makes people feel connected through the use of interactive links that form online communities. Through social media, people are able to form online communities and invite their friends to be part of it, creating a haven that could be leveraged on for positive health behaviour messages (Freeman & Chapman, 2008 cited in Levac& O’Sullivan, 2010).



In addition to connectedness, which the social media provides, it is also an interactive medium of communication. In the words of Andreas Kaplan and Michael Haenlein cited in Baruah (2012): "...social media is "a group of internet based applications that build on the ideological and technological foundations of Web 2.0, and that allows the creation and exchange of user generated content." Social media is for social interaction as a subset beyond social interaction. Enabled by ubiquitously accessible and scalable communication techniques, social media has subsequently changed the way organization, communities and individuals communicate (p.2).

The findings of the study by Giustini *et al.* (2018) also collaborates with the views held by Baruah (2012) and Mhunpiew and Purayidathil (2015) who opine that student use social media to contribute by asking questions or making their own discussion points across professional societies, organizations or faculty. As they also found out that professional health practitioners use social media to increase their erudition, allowing for a wider access to peer to peer learning: Positive feedback (if not clear evidence) was provided in some studies where SM was used in online and mobile learning. Identified benefits of using mobile-enabled SM in health education were related to the acquisition of new skills and knowledge for users' on-the-go. Health professionals used SM to engage in mobile and socially-distributed learning and peer-to-peer interaction. Use of Facebook and Twitter was viewed favourably and rarely associated with harmful in e-professionalism or social relationships (p.14).

Due to the interactive and collaborative nature of social media, it can replace the face to face instructions such as peer assessments, discussions and collaborative works. They further stated that social media has made educational activities more collaborative, interactive and has given students more responsibility towards their education and are more effective. Muhunpiew and Purayidath (2015) cite the US Department (2009) which states that classes using social media or online systems were more effective than the class using the traditional face to face instructions. Thus the interactive nature of social media makes it an effective tool for learning and thus can be channelled to changing sanitary behaviours leading to a higher sanitary situation for optimal health. In the study by Guistini *et al* (2018), they found that in public health, there was growing usage of social media to educate the public about avoiding infectious agents and to monitor emerging health threats.

Similarly, in their study "Social media for health promotion and weight management: A critical debate," Jane, Jagger, Foster, Ho and Pal (2018) examined how social media can be used to influence weight management and health promotion. They however, acknowledged that the internet has created new opportunities for delivering health promotion intervention as internet coverage continues to rise globally. Their studies found out that social media allows for connections thus leading to low anxiety, depression and greater subjective wellbeing. They also suggested that online social networks are capable of influencing social norms thus changing the way people do things. The views held by Jane *et al* (2018) are in consonance with Pan, Sheng, Tien, Chien, Chen and Chang (2016) as they opined that people complied more when Facebook



was used to promote hand washing hygiene as against the mechanical media. There was an improvement from 69.02 to 81.1% compliance rate.

METHODOLOGY

The study adopted the descriptive survey research design. The population of the study was 8,928,041 while the sample size was 384 based on Krejcie and Morgan 1970 table. Multistage sampling and proportionate sampling techniques were used select respondents. The instrument for data collection was questionnaire. The data collected from the field were presented using frequency distribution tables and simple percentages. The data were analysed using the weighted mean scores (WMS) on a four-point Likert Scale and a 2.5 decision rule.

DATA PRESENTATION AND ANALYSIS

Table 1: Hand washing

Statement	SA	A	D	SD	N	Σ	Mean	Remark
I have seen messages on hand washing from Rivers state Ministry of Health on social media	4 (16)	101 (303)	122 (244)	157 (157)	384	720	1.9	Disagreed

The above table shows that majority of the respondents have not seen messages on hand washing from Rivers State Ministry of Health on social media. This means that while some respondents at some point or the other had seen the messages from Ministry of health on hand washing, majority had not.

Table 2: Clean environment

Statement	SA	A	D	SD	N	Σ	Mean	Remark
I have regularly seen messages on clean environment by Rivers state Ministry of Health on social media	0 (0)	0 (0)	126 (252)	258 (258)	384	510	1.3	Disagreed

Respondents on the above table disagreed that they've accessed messages on regular basis from the Ministry of Health on clean environment.

Table 3: Water treatment

Statement	SA	A	D	SD	N	Σ	Mean	Remark
I have regularly seen messages on water treatment before use by Rivers state Ministry of Health on social media	0 (0)	0 (0)	115 (230)	269 (269)	384	499	1.3	Disagreed

The above table shows that respondents have not been seeing regular messages on water treatment before use in Rivers State from the Ministry of Health. This is a serious negligence



because the ministry of health ought to be proactive in emphasizing the importance of water treatment on the health practices of Rivers people.

Table 4: Effect of open defecation

Statement	SA	A	D	SD	N	Σ	Mean	Remark
I have regularly seen messages on open defecation by Rivers state Ministry of Health on social media	0 (0)	0 (0)	5 (10)	379 (379)	384	389	1.0	Disagreed

The above table also shows that the respondents disagreed that they have regularly seen messages on open defecation by Rivers state Ministry of Health on social media. This also shows inactivity of the Ministry of health on social media.

Table 5: Cartoons on safe sanitary practices by Rivers state Ministry of Health

Statement	SA	A	D	SD	N	Σ	Mean	Remark
On social media, I regularly see cartoons on safe sanitary practices by the Rivers state Ministry of Health	0 (0)	0 (0)	121 (242)	263 (263)	384	505	1.3	Disagreed

Table 5 shows that respondents have not been seeing cartoons on safe sanitary practices by the Rivers State Ministry of Health.

Table 6: Text on safe sanitary by Rivers state Ministry of Health

Statement	SA	A	D	SD	N	Σ	Mean	Remark
On social media, I regularly see text on safe sanitary practices by the Rivers state Ministry of Health	0 (0)	0 (0)	14 (28)	370 (370)	384	398	1.0	Disagreed

The result on table 6 shows that respondents do not regularly see texts on safe sanitary practices by the Rivers state Ministry of Health.

Table 7: Videos of safe sanitary practices by Rivers state Ministry of Health

Statement	SA	A	D	SD	N	Σ	Mean	Remark
On social media, I regularly see videos of safe sanitary practices by the Rivers state Ministry of Health	0 (0)	0 (0)	300 (600)	84 (84)	384	684	1.8	Disagreed

There was a disagreement also that respondents regularly see videos of safe sanitary practices by Rivers state Ministry of Health.



Table 8: Pictures on safe sanitary practices by Rivers state Ministry of Health

Statement	SA	A	D	SD	N	Σ	Mean	Remark
On social media, I regularly see pictures on safe sanitary practices by Rivers state Ministry of Health	0 (0)	0 (0)	215 (430)	169 (169)	384	599	1.6	Disagreed

From the above table, not even pictures on safe sanitary practices have been seen by respondents from the Ministry of Health on social media.

Table 9: Audios on safe sanitary practices by Rivers state Ministry of Health

Statement	SA	A	D	SD	N	Σ	Mean	Remark
On social media, I regularly see audios on safe sanitary practices by Rivers state Ministry of Health	0 (0)	0 (0)	15 (30)	369 (369)	384	399	1.0	Disagreed

The result on table 9 shows that respondents have not seen audio messages on safe sanitary practices on social media coming from the Rivers state Ministry of Health.

Table 10: Reaction through Sharing

Statement	SA	A	D	SD	N	Σ	Mean	Remark
I regularly react to the messages on sanitary practices on social media by Rivers state Ministry of Health by sharing the information to others	0 (0)	0 (0)	45 (90)	339 (339)	384	429	1.1	Disagreed

With a mean score of 10 which is minimal, the respondents confirmed that they do not react to or share messages on sanitary practices from Rivers State ministry of health.

Table 11: Reactions to Safe Sanitary Practices

Statement	SA	A	D	SD	N	Σ	Mean	Remark
I regularly react to the messages on safe sanitary practices by Rivers state Ministry of Health by leaving comments on the social media pages	0 (0)	0 (0)	29 (58)	355 (355)	384	413	1.1	Disagreed



The respondents on table 11 showed a mean score of 1.1 in disagreement that they react regularly to messages on safe sanitary practices by Rivers state Ministry of Health by leaving comments on the social media pages.

Table 12: Reactions through action on Safe Sanitary Campaign

Statement	SA	A	D	SD	N	Σ	Mean	Remark
I regularly react to messages on safe sanitary on social media by the Rivers state Ministry of Health by carrying out campaign on safe sanitary practices.	0 (0)	0 (0)	312 (624)	72 (72)	384	696	1.8	Disagreed

Respondents disagreed that they regularly react to messages on safe sanitary on social media by the Rivers state Ministry of Health by carrying out campaign on safe sanitary practices. This is not surprising as they earlier indicated that they barely see messages on safe health practices from Ministry of Health on social media; you can only react to what you see.

DISCUSSION OF FINDINGS

Research Question 1: How does the Rivers State Ministry of Health use social media to promote safe sanitary practices in Rivers state?

The result on table 1 to 4 shows that the Rivers State Ministry of health has performed poorly in the use of the social media for sanitary advocacy despite their presence on the social media. Majority of the respondents have not seen messages on hand washing from Rivers State Ministry of Health on social media. This means that while some respondents at some point or the other had seen the messages from Ministry of health on hand washing, majority had not. This finding corroborates the view of Uchejeso and Obiora (2020) which suggests that improvements in hand hygiene has resulted in reductions in respiratory illness thereby making hand hygiene education a beneficial intervention that could assist Nigerians to reduce disease burden such as the COVID-19. p.

One of the fundamental prerequisites for prevention and control of the pandemic of 2020 was consistent hand hygiene, which includes washing hands and utilizing alcohol-based hand sanitizers (Uchejeso & Obiora, 2020). This led to numerous social media platforms launching various online campaigns. One of them stood out because it included stickers promoting the use of hand soap and staying at home as hygienic practices (Bell, 2020). Respondents disagreed that they have accessed messages on regular basis from the Ministry of Health on clean environment. This was also a major negligence on the part of the ministry as any effort aimed at safe sanitary practice is considered valuable for human existence. This importance was emphasized by Karn, Bhandari and Jha (2012) thus:



Every 20 seconds, a child around the world dies as a result of poor sanitation. About 80% of all disease of the developing world is related to unsafe water and inadequate sanitation. Worldwide, 5.3% of all deaths and 6.8% of all disability are caused by poor sanitation, poor hygiene and unsafe water. Nearly two-thirds (67%) of the total population go for open-air defecation and only one-third (33%) having access to a latrine (p. 39). Because they also enhance peoples' overall wellbeing and general health, safe sanitary practices cannot be easily distinguished from health-related activities; they are indeed the core of health education necessities. This is because healthy life begins with safe sanitary practices. The respondents further stated that they have not been seeing regular messages on water treatment before use in Rivers State from the Ministry of Health. This is a serious negligence because the ministry of health ought to be proactive in emphasizing the importance of water treatment on the health practices of Rivers people. Respondents disagreed that they have regularly seen messages on open defecation by Rivers state Ministry of Health on social media. This also shows inactivity of the Ministry of health on social media. A further investigation shows that the last time the Ministry of health posted on its Facebook page (Rivers State Ministry of Health) was in the year 2012 indicating that the official page have been dormant for almost a decade.

Research Question2: What forms of communication such as text, cartoons, videos and audios are more commonly used on social media when designing health-based messages on safe sanitary practices by Rivers State Ministry of Health?

The results show that the Rivers State Ministry of health was not fully involved in social media mobilization as they neither used cartoons, texts, videos or audio messages on their social media platforms as majority of the respondents disagreed on such usage. Respondents have not been seeing cartoons on safe sanitary practices by the Rivers State Ministry of Health while the result also shows that respondents do not regularly see texts on safe sanitary practices by the Rivers state Ministry of Health.

There was a disagreement also that respondents regularly see videos of safe sanitary practices by Rivers state Ministry of Health. From the above table, not even pictures on safe sanitary practices have been seen by respondents from the Ministry of Health on social media. The result further shows that respondents have not seen audio messages on safe sanitary practices on social media coming from the Rivers state Ministry of Health. According to the World Health Organization, there is a link between health and sustainable development thus leading to the development of the global principles and action areas for health promotion (WHO, 2016). The communication needed to promote health includes verbal and written strategies aimed at influencing, empowering individuals, populations and communities to make healthier choices (Rural Health Information Hub, n.d). Failure on the part of the Rivers State Ministry of health to utilize any of the above means to reach out to the audience on social media is a great negligence.



This is disagreement with the tenet of the technological determinism theory which stipulates that the dominant technology in vogue at a particular point in time is what determines the technology being used at that point in time. Adler (2006) opines that technology determinism is simply the idea of the important effects technology has on our lives citing an example of how the internet has revolutionised the world.

Research Question 3: How do residents of Rivers State react to social media messages from Rivers State Ministry of Health?

The result shows that there was a unanimous disagreement that respondents regularly react to messages on safe sanitary practices on social media by Rivers state Ministry of Health by doing what the message says. Reactions also show that the respondents confirmed that they do not react to or share messages on sanitary practices from Rivers State ministry of health. Furthermore, respondents disagreed that they regularly react to messages on safe sanitary on social media by the Rivers State Ministry of Health by carrying out campaign on safe sanitary practices. This is not surprising as they earlier indicated that they barely see messages on safe health practices from Rivers State Ministry of Health on social media; you can only react to what you see.

Jane, Jagger, Foster, Ho and Pal (2018) examined how social media can be used to influence weight management and health promotion. They however acknowledged that the internet has created new opportunities for delivering health promotion intervention as internet coverage continues to rise globally. However, the findings show that this internet usage on a global scale has not influenced the media choice of the Rivers State Ministry of Health. Their studies found out that social media allows for connections thus leading to low anxiety, depression and greater subjective wellbeing. They also suggested that online social networks are capable of influencing social norms thus changing the way people do things. The views held by Jane *et al* (2018) are in consonance with Pan, Sheng, Tien, Chien, Chen and Chang (2016) as they opined that people complied more when Facebook was used to promote hand washing hygiene as against the mechanical media. There was an improvement from 69.02 to 81.1% compliance rate.

The absence of messages from the Rivers State Ministry of Health on the social media invariable shows that there won't be any message to react to and the above results show this lacuna; the audience do not react to messages because they don't see the messages. Here also, the technology in play did not determine media usage for sensitization on sanitary practices. For Hauer (2007) technology determinism is the belief that technology is the arch initiator or driver of society's transformation. Thus the pace of a society's transformation or growth is determined to a large extent by the existing technology of that era and society.



CONCLUSION AND RECOMMENDATIONS

This study has shown that social media platforms (Facebook, Twitter, WhatsApp, and Instagram) are widely used in Rivers State, and their usage can significantly influence sanitary practices, but this potential has not been fully explored by the government. In view of this, government agencies, particularly the Ministry of Health, and NGOs should be encouraged to begin to leverage social media platforms to disseminate sanitation and hygiene messages, and collaborate with influencers to amplify their reach.

Ethical clearance

Ethical consent was sought and obtained from the participants used in this study. They were made to understand that the exercise was purely for academic purposes, and their participation was voluntary.

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Conflict of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Authors' Contributions

Osuo-Lovrane Dorah Morton, conceived and conducted the study including the design, data gathering, analysis and interpretation under the supervision of Professors Godwin Bassey Okon, and Barigbon Gbara Nsereka. All authors have critically reviewed and approved the final draft, and are responsible for the content and similarity index of the manuscript.

Availability of data and materials.

The datasets on which conclusions were made for this study are available on reasonable request.

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REFERENCES

Adegboye, M. (2016) Socio-economic status categories of rural dwellers in Northern Nigeria. *Advances in Research* 7(2), 1-10. www.sciedomain.com

Aderounmu, B., Azuh, D., Onanuga, O., Oluwatomisin, O., Ebenezer, B., Azuh, A. & Amoo, E. (2021). Poverty drivers and Nigeria's development: Implications for policy intervention. *Cogent Arts & Humanities*.8(1) DOI:10.1080/23311983.2021.1927495. <https://tandfonline.com>

Ajwon, G. (2015) internet accessibility and use of online health information resources by doctors in training healthcare institutions in Nigerian. *Library Philosophy and Practice (e-journal)* 1258. Retrieved from <http://digitalcommons.unl.edu/libphilprac/1258>

Alexander, C., Shrestha, S., Tounkara, M., Cooper, S., Hunt, L., Hoj, T., Dearden, K., Kezakubi, D., Atugonza, V., West, J., Crookston, B. & Hall, C. (2019) Media Access is Associated with Knowledge of Optimal Water, Sanitation and Hygiene Practices in Tanzania. *International Journal of Environmental research and Public health*.

Alsubaie, A. Q & Lyndon, N. (2020). The Perceived impact of social media access on rural communities in Al-AhsaRegion, Saudi Arabia. *Journal of Social Sciences and Humanities*

Baruah, T. D (2012). Effectiveness of social media as a tool of communication and its potential of technology enabled connections: A micro-level study. *International Journal of Scientific and Research Publications*.2(5). 2250-3153, retrieved from www.ijrsp.org.

Carey, R. D (2017). Impact of social media on higher education system and its effect on students in China. *Journal of Teacher Education*, 2017 (10).

Dan-Nwafor, C.C., Ogbonna, U., Onyiah, P., Gidado, S., Adebobola, B., Nguku, P. & Nsubuga, P. (2019). A cholera outbreak in a rural north central Nigerian community: An unmatched case control study. *BMC Public Health* 19(112). <https://doi.org/10.1186/s12889-018-6299-3>

Daramola, O. & Olowoporoku, O. (2016) Environmental sanitation practices in Osogbo, Nigeria: An assessment of residents' sprucing-up of their living environment. *Economic and Environmental Studies*.16(4), 699-716.

Duru, C.B., Iwu, I.C., Diwe, K.C., Uwakwe, K.A., Merenu, I.A., Madubueze, U.C., Okedo-Alex, I.J., Ndukwu, E.U., Ohale, I., & Nwaigbo, E. (2017) Environmental Sanitation Practices: A Case Study of Solid Waste Management in Semi-Urban Communities in Orlu, Imo State Nigeria. *Occupational Diseases and Environmental Medicine*, 5, 88-105. <http://www.scirp.org/journal/odem>



Ekong, I. E (2015) An assessment of environmental sanitation in urban community in Southern Nigeria. *African Journal of Environmental Science and Technology* 9(7), 592-599. DOI:10.5897/AJEST2015.1882. Retrieved from <https://www.ajol.com>

Federal Ministry of Water Resources (FMWR), Government of Nigeria, National Bureau of Statistics (NBS) and UNICEF (2020). Water, sanitation and hygiene: National outcome routine mapping (WASH NORM) 2019: A report on findings. FCT Abuja; Nigeria retrieved from <https://www.unicef.org>

Gaudin S. (July 1, 2016). Facebook looks to break language barriers with new translation tool (a blog post) computer world. Retrieved from <https://www.computerworld.com>

Griggs, I (2019, July 3rd) Exclusive: Which government departments are the best at using social media? *PRWeek* retrieved from <https://prweek.com>

Hauer, T. (2017) Technological determinism and new media. *International Journal of English, Literature and Social Science (IJELS)* 2(2), 1-4.

Hoehe, M., & Thibaut, F. (2020) Going digital: How technology use may influence human brains and behaviour . *Dialogues in Clinical Neuroscience* 22(2), 93-97
doi:1031887/DCNS.2020.22.2/mhoehe. Retrieved from <https://www.ncbi.nlm.nih.gov>

Jan, A., Khan, S.A., Naz, S., Khan, O. & Khan, A.Q (2021) Marshall McLuhan's technology determinism theory in the area of social media. *Pakistan Journal of Social Sciences*. 18(2), 30-34. Retrieved from <https://www.medwelljournals.com>

Jane, M., Hagger, M., & Foster, J., (2018).social media for health promotion and weight management: a critical debate. *BMC Public Health* 18, 932. 1471-2458.

Jimma, J.D (2017). Language of social media: examination of English as a lingua franca in social media (an essay in B.A in English) School of Humanities, department of English. University of Iceland. Retrieved from <https://researchgate.net> on January 30,2021

Joshua, B.P & Glanda, G.G (2016) Slum Conditions in Urban Nigeria: A Case of Jimeta-Yola, Adamawa State, Nigeria. *Journal of Environment and Earth Science* 6(3), ISSN 2225-0948 (Online) retrieved from www.iiste.org on 4th July 2019

Kabir, S.M.S (2016) Methods of data collection. Basic Guidelines for Research: An introductory approach for all disciplines. First edition. Book Zone Publication. Chittagong-4203, Bangladesh. Pp. 201-275



Kaplan, A. M., & Haenlein, M. (2009). Users of the world, unite! The challenges and opportunities of Social Media. *Elsevier*. doi:10.1016/j.bushor.2009.09.003.

Krejcie, R. V. & Morgan, D. W (1970). Determining sample size for research activities. *Educational and Psychological Measurement*. 30, 607-610. Retrieved from <https://home.kku.ac.th> on 13th April, 2021.

Lantz-Andersson, A. (2018) Language play in a second language: social media as contexts for emerging sociopragmatic competence. *EducInfTechnol* 23; 705-724. DOI 10.1007/s10639-017-9631-0. Springer

Lotfinejad, N., Assadi, R., Aelami, M. H. & Pitttet, D. (2020) Emojis in public health and how they might be used for hand hygiene and infection control. *Antimicrobial Resistance and Infection Control*. 9(21) <https://doi.org/10.1186/s13756-020-0692-2>.

Manning, J. (2014) Social media, definition and classes of. In K. Harvey (Ed.), *Encyclopaedia of social media and politics* (pp.1158-1162). Thousand Oaks, CA: Sage

McLuhan, M (1964) Understanding media: The extensions of man [1st ed.] New York: McGraw- Hill

Mendoza-Herrera, K., Valero-Morales, I., Ocampo-Granados, M. E., Reyes-Morales, H., Arce-Amare, F & Barquera, S. (2020). An overview of social media use in the field of public health nutrition: Benefits, scope, limitations, and a Latin America experience. *Preventing Chronic Diseases: Public Health Research, Practices and Policy*, 17(76). DOI: <https://doi.org/10.5888/pcd17.200047>. Retrieved from <https://www.cdc.gov>

Mhunpiew, N. & Purayidathil, J. (2015). Social networks as a tool for education: An awareness of school leaders. *US-China Education Review A*, 5(2), 135-141 doi: 10.17265/2161-623X/2015.02.006 retrieved from <https://researchgate.net> on January 24, 2022

Mundt, M., Ross, K., & Burnett, C. (2018) Scaling social movements through social media: The case of Black Lives Matter. *Social Media + Society*. 1-14. DOI :10.1177/2056305118807911. Retrieved from <https://journals.sagepub.com>. On 11th April, 2021

Ndumbe-Eyoha, S. & Mazzucco, A. (2016). Social media, knowledge translation, and action on the social determinants of health and health equity: A survey of public health practices. *Journal of Public Health Policy* 37(2), 249–S259.



Nicholas, D., Watkinson, A., Rowlands, I &Jubb, M. (2011) Social media academic research and the role of university libraries. *The Journal of Academic Librarianship*. 5(37) 373-375 DOI 10.1016/j.acalib.2011.06.023. Elsevier Publisher retrieved from <https://www.infona.pl/resource> on 11th April, 2021.

Nigeria Zip Codes (n.d) List of Towns and Villages in Degema LGA. Retrieved from <https://nigeriazipcodes.com> on 26th March, 2021

Nkwocha, E., Pat-Mbano, E &Okeoma, I (2012) Sanitation indicators in the rural communities of South-Eastern Nigeria:Additional evidence of policy failure in rural development. *An International Multidisciplinary Journal Ethopia* 6(1)24, 155-170. DOI:<http://dx.doi.org/10.4314/afrrev.v6i1.13>

Nwakile, T., Eze, C., &Okanya, A., (2017) Sanitation Practices on Students Health: A Case Study of Students of Vocational and Technical Education in the University of Nigeria, Nsukka. *International Journal of Multidisciplinary and Current Research*. 5 (Sept/Oct 2017 issue). ISSN: 2321-3124. Retrieved from <https://www.researchgate.net> on 5th September, 2021

Okafo, C.N. &Nwude, M.O (2016) Sanitation and Hygiene Practices of Nigeria's Coastal Communities and Associated Socioeconomic Characteristics: Study of Two Akwa Ibom Communities. *British Journal of Applied Science & Technology* 14(2): 1-12, ISSN: 2231-0843. DOI: 10.9734/BJAST/2016/20512

Okon, G.B &Ihejirika, W.C (2015).The 2015 deadline for digitalisation of broadcasting and awareness/knowledge ratio among information workers in Port Harcourt. *Review of Communication and Media Studies*. Vol 1, Issue 1. Pg 39-47. Retrieved from <https://researchgate.net> on 11th April,2021.

Pan, S., Sheng, W., Tien, K., Chien, K., Chen, Y. & Chang, C. (2016) Promoting a hand hygiene program using social media: An observational study. *JMIR Public Health Surveillance* 2(1):e5. Doi:10.2196/publichealth.5101 retrieved from <https://ncbi.nlm.nih.gov> on November 1, 2021.

Roncallo-Dow, S. &Scolari, C. (2016) Marshall McLuhan: The possibility of re-reading his notion of medium (article). *Philosophies* vol 1 (2) pp 141-152<https://doi.org/10.3390/philosophies1020141> Retrieved from <https://www.mdpi.com> on 30th August, 2021.



Talley, E. M (2014) Language Technology and the “They self”: How Linguistic manipulation of mass and social media distract from the authentic self. (thesis in fulfilment of B.Sc in interdisciplinary studies) university of New Orleans.

Thitvesa, V. (August 30, 2017) Technology determinism & Social media. Retrieved from <https://medium.com> on august 30, 2021

Tiryakioglu, F. & Erzurum, F. (2011).Use of social networks as an education tool. *Contemporary Educational Technology*. 2(2), 135-150. Retrieved from <https://researchgate.net> on february 7, 2021

Visser, P.S, Krosnick, J.A & Lavrakas, P. J (2000) Survey Research.In H.T Reis & C. M. Judd (Eds.), Handbook of research methods in social and personality psychology (p. 223-252).Cambridge University Press.

WHO & UNICEF Joint Monitoring Programme for water Supply and Sanitation (2010). Progress on sanitation and drinking water: 2010 update. World Health Organisation.France ISBN 97892415563956. <https://apps.who.int/iris/handle/10665/44272>

Wong, C.A., Merchant, R. M. & Moreno, M. (2014).Using social media to engage adolescents and young adults with their health. *Healthc (Amst)*.2(4): 220-224. doi:10.1016/j.hjdsi.2014.10.005. retrieved from <https://researchgate.net> on february 12, 2022

Worika, I.L., &Etemire, U. (2020) Environmental sustainability and regulations in Rivers State, Nigeria. *Chinese Journal of Environmental Law*.4(1).71-96. DOI:<https://doi.org/10.1163/24686042-12340050>. Retrieved from <https://www.brill.com> on June 2, 2021

World Health Organization (2007).The World Health Report 2007.A safer future. Retrieved from <https://www.who.int> on January 14, 2020

World population review (website) (n.d) Developing countries 2021. <https://www.worldpopulationreview.com>

Yasuda, R. & Batres, R. (2012). An agent based model for analyzing Diffusion of biodiesel production schemes. *Computer Aided Chemical Engineering* (Vol 30) pages 192-196. Retreived from <https://doi.org/10.1016/B978-0-444-59519-5.50039-3>.