

SOCIAL MEDIA, ENVIRONMENTAL HEALTH DEVELOPMENT CAMPAIGNS, PARTICIPATION AND BEHAVIOUR CHANGE AMONG THE UNIVERSITY OF NIGERIA, NSUKKA STAFF

¹ODOEMELAM CHINEDU CHRISTIAN, ²ANYADIKE DOMINIC O.,
³EBEZE UCHE VICTOR & ⁴OKOROM EMMANUEL MORGAN
¹Department of Mass Communication, University of Nigeria, Nsukka
²School of General Studies, University of Nigeria, Nsukka
³Department Of Mass Communication, Nnamdi Azikiwe University, Awka
⁴Department of Mass Communication University of Nigeria, Nsukka

Abstract

There is growing evidence that the social media of communication with their characteristics decentralized media activities provide avenue for positive participation in development objectives. However, little is known about their contribution to environmental health development. Therefore, in this study, we examine the influence of social media on the environmental health behavior and level of participation of staff of the University of Nigeria, Nsukka. The survey research method was used and data, using the Questionnaire, was collected from a sample size of 120 respondents. The Health Belief Model (HBM) served as the theoretical fulcrum. Findings show that the level of participation in environmental health initiatives is high and significant. However, behaviour change is at the average. Discussions were based on the results, implications and suggestions.

Keywords: *Social Media, Environmental Health Development, Campaigns, Participation, Behaviour Change.*

Introduction

Environmental problems have been the subject of much discussion among scholars, environmental movements and policy makers over the past decades. This overt focus on this issue is not unconnected to the fact that environmental problems pose a great challenge to human health and societal well-being. World Health Organisation (WHO) (2012) found that, maintaining a healthy environment is central to increasing quality of life and years of healthy life. Also, there is a growing body of scientific research suggesting that extreme weather events (e.g., heat waves) will become more frequent as a result of climate change and that this will impact on the environment negatively (Akompab, et al 2013; Ajeet, 2012). Scholars (Poumadere et al 2005; Dole et al, 2011; Hergel et al, 2007) note that environmental disturbances share close

relationship with public health.

Globally, nearly 25 percent of all deaths and the total disease burden can be attributed to environmental factors World Health Organisation (WHO-)2006). Environmental factors are diverse and far reaching. They include:

1. Exposure to hazardous substances in the air, water, soil, and food
2. Natural and technological disasters
3. Physical hazards
4. Nutritional deficiencies
5. The built environment

There has been growing interest in understanding public views and participation on environmental issues, especially with the advent of participatory modes of communication made possible by the internet facilitated social media. A number of studies

have examined public perception and attitudes towards environmental health challenges (Noji & Lee, 2005; Akompab et al; 2013) and most of these studies have found that public attitudes and participation have varied over the years.

The increasing use, all over the globe of social media for communication purposes, creates a ready platform for its application in the field of environmental health. (Korda & Itani, 2012) showed that at the end of 2008, 74% of U.S. adults in nearly equal percentages went online, in search of health related information. These studies observed that a vast majority of those adults who were searching for health information, used the social media (Fox, 2011 cited in Korda & Itani, 2012). This finding is axiomatic to the objective of this study which seeks to examine how social media have influenced the participation and variability of behavior to environmental health issues among the staff of University of Nigeria, Nsukka.

Although environmental issues are rampant in Nigeria, there are limited studies that have specifically examined social media and people's participation and attitudes towards environmental health challenges. The aim of this study was therefore to examine the role of social media in public participation and attitude toward environmental healthiness. Studies show that educated or literate people are more likely to make use of social media than illiterates (Korda & Itani, 2012). Staff and members of the University of Nigeria are assumed to be educated and therefore, they are more likely to put social media to use for their research and communication purposes. Finding out social media's role in the participation and attitudes towards environmental health issues may be important in informing public education, policy and communication strategies for combating environmental health challenges. Furthermore, having an understanding of public attitudes may be important since any success to address potential consequences associated with environmental health, may

depend on public views about the phenomenon.

This study therefore, offers an understanding of the influence of these emerging communication methods (social media) on the participation and attitude of the staff of the University of Nigeria, Nsukka (UNN) to environmental health issues. Hence, we ask: What is the level of participation of UNN staff on environmental health discourse on the social media? What is the level of influence of social media on environmental health behaviour of UNN staff?

Statement of the research problem

Environmental health issues have occupied the front burner in discourses among Nigerians over time. Some of these environmental health issues include, waste disposal, clean water, air pollution, oil spillage, bush burning, erosion, flooding, etc. For instance, the year 2012, witnessed a lot of environmental problems, especially flooding, which may result in several other health issues (Odoemelam et al 2013). We had earlier established that adverse environmental occurrence, impact negatively on health, and that people are usually worried when an issue is likely to create health difficulties for them. One of the ways they may respond to this challenge is to seek information and participate in discussions pertaining to the issue. But there is a gap in literature addressing how social media has influenced people's attitude and participation on environmental health discourse. It is assumed that, seeking information and participating in discourses related to adverse environmental health (in this case, human and naturally induced) may help them take precautionary measures.

Literatures (Langley, D. & Broek, T. (2010), (Kinney, L. (2008) have shown that people of all age and racial groups use the Internet to search for health information, that social media have been used to obtain information about health and wellness and that literate communities use the internet-mediated channel to communicate and make research. However, little is known of how they may participate in or respond to

environmental health issues, especially when the medium of interaction is the social media. Specifically, what is the level of participation of UNN staff on environmental health discourses via the social media? What is the level of influence of social media on environmental health behaviour of staff of University of Nigeria, Nsukka?

Research Question

These research questions served as a guide to the study:

- i. What is the level of participation of UNN staff on environmental health discourse on the social media?
- ii. What is the level of influence of social media on environmental health behaviour UNN staff?

Objective of the study

To achieve the purpose of this study these objectives were outlined:

- i. To assess the level of participation of UNN staff on environmental health issues on the social media.
- ii. To ascertain the influence of social media on environmental behaviour of UNN staff.

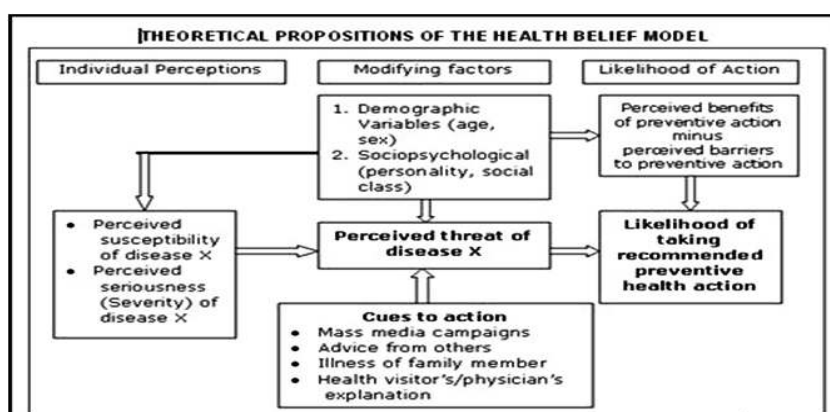
Theoretical framework

1. The Health Belief Model (HBM):
The Health Belief Model (HBM) is

one of the first theories of health behavior. It was developed in the 1950s by a group of U.S. Public Health Service social psychologists who wanted to explain why so few people were participating in programs to prevent and detect disease (Croyle, 2005; Elkin, 2008; Kinney, 2008). HBM is a good model for addressing problem behaviors that evoke health concerns. The health belief model proposes that a person's health-related behaviour depends on the person's perception of four critical areas:

- a) the severity of a potential illness,
- b) the person's susceptibility to that illness,
- c) the benefits of taking a preventive action, and
- d) the barriers to taking that action.

The model postulates that health-seeking behaviour is influenced by a person's perception of a threat posed by a health problem and the value associated with actions aimed at reducing the threat. HBM addresses the relationship between a person's beliefs and behaviors. It provides a way to understanding and predicting how clients will behave in relation to their health and how they will comply with health care therapies.



(A diagrammatic representation of the HBM. Source: (Croyle, 2005; wikipedia)

The Major Concepts and Definitions of the Health Belief Model

There are six major concepts in HBM:

- I. Perceived Susceptibility
- II. Perceived severity
- III. Perceived benefits
- IV. Perceived costs
- V. Motivation
- VI. Enabling or modifying factors

I. Perceived Susceptibility: refers to a person's perception that a health problem is personally relevant or that a diagnosis of illness is accurate.

II. Perceived severity: even when one recognizes personal susceptibility, action will not occur unless the individual perceives the severity to be high enough to have serious organic or social complications.

III. Perceived benefits: refers to the patient's belief that a given treatment will cure the illness or help to prevent it.

IV. Perceived Costs: refers to the complexity, duration, and accessibility and accessibility of the treatment.

V. Motivation: includes the desire to comply with a treatment and the belief that people should do what.

Modifying factors: include personality variables, patient satisfaction, and socio-demographic factors (Croyle, 2005; wikipedia).

Literature Review

1. Social Media and Behaviour Change Studies (Pavel, 2012; Bonnefoi, 2010) have shown the close link between environmental situation and public health. For instance Ajeet (2012) in his study E-waste management: An emerging environmental and health issue in India, examined e-waste as a

rapidly growing problem in the world. His finding showed that E-waste comprise a multitude of components, some containing toxic substances that can have an adverse impact on human health. He recommended that legislations need to be transformed to active policies which will pave way for a brighter pollution free future in India (Ajeet, 2012: 110) This finding agrees with the finding of others studies (Radovic and Curcic, 2012, Akompab, 2013). These studies offer insight into an understanding of how environmental issues affect human health and how legislation could arrest the situation.

However, (Pavel, 2012) found that little is known or the practical mechanisms and challenges to ensure adequate environmental conditions. Since this present study examines the role of social media in influencing attitude towards environmental health issues, it is believed that it would be a good starting point to finding a collective, participatory solution to better environmental conditions which will enhance better health.

Gerhards & Schafer (2009) have discussed the role of the public sphere-facilitated media in modern society. They note that it serves as a forum in which to communicate collectively relevant issues, and allow citizens to inform themselves about societal developments and to observe and control socio-political issues. In their study titled, Is the internet a better public sphere? Comparing old and new media in the US and Germany, They conclude that internet communication was not more pervasive than print media and as such, does not adequately provide a platform for public discourse than the old media. But other studies do not agree with this finding. For instance Korda & Itani (2012) found that people of all demographics are adopting internet technologies, whether on their computers or through mobile devices to engage on public issues of discourse. Their study, Harnessing social media for health

promotion and behavior change, observed that, rapid and innovative advances in participate internet communications, referred to as social media offer opportunities for modifying health behaviour. Their finding is useful to this study and offers an understanding of how social media could be used as a tool for environmental health salvation.

1. Social media and social Interactions:

Social media may be defined as technology-facilitated dialogue among individuals or groups; examples include blogs, forums, wikis, content sharing, social networking, social bookmarking, and social gaming (Reilly & Weirup, 2010). Social media are interactive, web-based media. They belong to the new genre of media that focus on social networking, allowing users to express themselves, interact with friends, share personal information, as well as publish their own views on the internet (Adibe et. al; 2012). The various internet-based applications, from social networks to user-generated content and micro-blogging, have empowered nearly every internet user to be a potential broadcaster (willingly or unknowingly) with millions of other users both locally and globally. This trend ensures new and emerging patterns of communication; demolish artificial and other similar borders while creating participatory and new forms of other creative expression (Odoemelam et al; 2012).

With the growth of the Internet, individuals, groups, and others now enhance their freedom of expression much more than the traditional media could have allowed. They exercise their rights to seek, receive and dispense information in a democratic way, by passing the standard gatekeepers who control much of what seeps into the public arena for a variety of reasons ranging from altruistic to outright selfishness. With the various

platforms the new media offers, it is possible for almost any citizen to communicate to a large audience; either through blogs, social networking sites, Internet groups, chatrooms, or other similar means. Now it is much easier for citizens around the world to challenge authorities on issues, expose corruption, and express their opinions via the internet. Images that would have been censored by media houses, either for its goriness or sensitive nature, gets frequently circulated online. Online, people make comments and write without restraints. With these new frontiers now being opened, the media is definitely better for it in many ways (Odoemelam et al; 2012).

2. Social media, Behavior Change and Health

Studies on social media as a vehicle for sustainable behaviour communication have been analyzed. For instance Largley & Brook (2010) in their study, Exploring social media as a driver of sustainable behaviour: case analysis and policy implications, found that social media can help participants to share their information to other participants in their own social networks and that it can stimulate behaviour change towards environmental health outcomes.

Corpus literature exist, showing the relevance of internet facilitated communication to human health issues. In their study, Internet interventions: theory and practice, Ritterband et al (2009), observed that one of the most notable aspects of the web is its ability to provide efficient, interactive and tailored content to the user. They concluded that, given the wide reach and extensive capabilities of the internet, researches in behavioural medicine have been using it to develop and deliver interactive and comprehensive treatment programs with the aim of impacting behaviour. Their finding is supported by the finding of other related

studies (Webb, 2010, Cugelman & Dewes 2011; Brouwer, 2011). Their finding provides a base for this present study which examines the role of social media in influencing attitude and participatory discussions pertaining to environmental health.

Research design

The survey research method is used in this study. Survey is appropriate because it seeks to elicit behavioural responses from the respondents. Reinard (2001:4) supports the use of this method in studies that seek to ascertain opinions. The population of the study includes staff members of the University of Nigeria, Nsukka. As Reinard suggests, it is important to know the population from which the sample will be drawn.

Teaching staff of the University of Nigeria is 1200. Therefore a sample size of 120 was drawn for the study. This is supported by Gay (1981) who postulated that a study's sample depends on the type of research involved. For a descriptive research as this, he recommends a minimum of 10% of the population. The study therefore adopted the minimum requirement of 10% in drawing the sample size.

Questionnaire served as the instrument for data collection. 120 copies of the questionnaire were administered by two of the researchers on a face-to-face basis to the participants in their offices. The questionnaire had two categories titled: Level of Staff Participation on Environmental Health Discussion on the Social Media (LSPEHDSM) and Level of influence of Social Media on the Environmental Health Behavior of UNN Staff (LISMEHB) respectively was developed after a review of the literature on environmental health and social media. Some questions and response options were informed by previous surveys on public attitudes towards environmental health challenges. All the questions were however

adapted to the context of social media and environmental health. The draft questionnaire was validated by 2 measurement and evaluation experts and piloted among a selection of 20 postgraduate students. Major revisions were made to the draft questionnaire to facilitate ease and understanding before it was finalized and administered.

The questionnaire had 17 items which were analysed with the use of mean statistics based on Likert scaling system. A scale of 5 points was used to measure the degree of response. The range was 5-1. Total values allotted to the responses were divided by 5 points to arrive at the Level of Acceptance. Schematically presented:

SA = Strongly Agree ----5
 A = Agree ----- 4
 U = Undecided -----3
 D = Disagree -----2
 SD = Strongly Disagree -1
 $5 \downarrow 4 \downarrow 3 \downarrow 2 \downarrow 1 \downarrow \frac{15}{5} \downarrow 3.0$

Rule: The Level of Acceptance is 3.0. The rule is that, high level acceptance will be implied, if an item in the questionnaire has a mean value greater than the minimum level of acceptance, 3.0. A rejection will be implied, if an item in the questionnaire has a mean value lesser than 3.0.

Limitations of the study

The study was limited to 120 respondents, so it may not stand for universal opinion. Another limitation which needs to be pointed out is respondent's biasness as against objective response. Moreover, there was no measure with which to verify their responses.

Data presentation and analysis

Total copies of Questionnaire distributed were 120. A total number of 120 copies were returned. The demographic data revealed the following age bracket of the population of study: The age data showed that,

those who were between the age group of 21-30 were 33 (27.5%), while those within the group of 31-40 were 55 (46%). Those who were 41 and above were 32 (27%). The Gender data showed that, males were 87 (76%), while females were 33 (27.5%). The Education variable showed that 4 (3.3%) had SSCE, while 83 (69.1%) had either Bachelor or HND. Those with either Masters or PhD were 33

(27.5). For the job category, 51 (42.5) were teaching staff, while 69 (57.5) were non-teaching staff.

Research question one: What is the level of participation on environmental health discourse on the social media?

Level of Staff Participation on Environmental Health Discussion on the Social Media (Instrument: LSPEHDSM)

S/N	ITEM	SA	A	U	D	SD	TOTAL	LA
1	I am acquainted with social media like phone, facebook, twitter, youtube and mobile phones	5 108 540	4 -	3 12 36	2 -	1 -	15 576 120	3.0 4.8
2	I use social media for communication Purposes	105 525	13 52	2 6	-	-	583 120	4.85
3	I read others people's comments and also comment on important issues through social media.	97 485	23 92	-	-	-	577 120	4.80
4	I am acquainted with environmental issues like, are pollution, flooding, ozone depletion, waste disposal, clean water resources, climate change etc	93 465	27 108	-	-	-	573 120	4.77
5	I think that environmental challenges are a threat to existence because they affect the entire ecosystem (land, water, air)	91 455	29 116	-	-	-	573 120	4.77
6	I have received and discussed issues on social media on environmental challenges.	55 275	23 92	21 63	11 22	10 10	462 120	3.85
7	I think social media is good platform for raising environmental issues, so I participate	75 375	23 92	-	-	22 22	485 120	4.0
8	The social media afford opportunities to share my opinion on environmental issues than newspapers and televisions	49 245	25 100	19 57	13 26	-	428 120	3.5
9	I see myself as a participant when environmental issues are raised; especially through social media.	67 335	34 136	-	19 38	-	509 120	4.2

In response to research question one, which asked: What is the level of staff participation on environmental health discussion through the social media, a nine item instrument, titled, LSPEHDSM was constructed. Analysis of the data will be used to determine if the respondents participate in discussions pertaining to environmental health through the social media.

The above analysis showed that the respondents are acquainted with social media, because item 1, who sought to know if they were acquainted, received high statistical support of 4.8 mean score. Also, item 2 received a high supportive data of 4.85, which means that the respondents use social media for their communication purposes.

Item 3 wanted to know if they

participate in social media by receiving and sending comments. This question received high statistical data, 4.80. Item 4 wished to know if the respondents were acquainted with environmental issues. The data showed adequate support of 4.77 mean score. Item 5 was interested in knowing if adverse environmental situations were a challenge to existence. Available data showed a statistical support of 4.77. Item 6 was interested in knowing if the respondents use the social media to engage in environmental discussions. This received acceptable statistical support of 3.85 though not very high. Item 7 on the hand was interested in knowing the respondent's opinion, i.e if the social medium was a veritable platform for discussing environmental issues. Data showed

statistical support of 4.0. Item 8 showed that social media avail opportunities to share opinion on environmental issues. The mean statistics was 3.5. Finally on this segment of

the instrument, Data retrieved on item 9, showed a mean score statistics of 4.2. This means that the respondents see themselves as participants on environment discourse via the social media.

Table 2: Level of influence of Social Media on the Environmental Health Behavior of UNN Staff (Instrument: LISMEHB).

S/N	ITEM	SA	A	U	D	SD	TOTAL	LA
		5	4	3	2	1	15	3.0
10	Environmental health campaigns via the social media may influence behavior towards environmental protection positively	93 465	27 108	-	-	-	573 120	4.7
11	Environmental health discussions on the social media have influenced my pattern of behavior.	87 435	-	23 69	-	10 10	504 120	4.2
12	I am not against the environmental health discussion I encounter on the social media	73 365	27 108	20 60	-	-	482 120	4.0
13	It is easy for me to change a particular habit especially if it has environmental health implications	92 460	25 100	3 9	-	-	569 120	4.7
14	I can attribute some environmentally positive changes in my habits due to my exposure to social media.	79 395	29 116	-	12 24	-	535 120	4.4
15	I feel that I am part of the effort to stop environmental decay	91 455	29 116	-	-	-	571 120	4.7
16	It gives me a sense of been an agent of change because I can take responsibility for the environment and the health implications	83 415	27 108	-	-	-	523 120	4.3
17	My opinion is that, social media has empowered me in this regard	79 395	41 164	-	-	-	559 120	4.6

The study was also interested in knowing if the social media influence attitude or behavior of UNN staff towards environmental issues. To answer, data was collected from an 8 item instrument titled LISMEHB.

Data from item 10 showed that environmental health campaigns on the media may influence positively, the behavior of UNN staff. This is supported by a statistical mean score of 4.7. Data from item 11 showed that health discussions on the social media platform have influenced UNN staff. Item 12, wanted to know the disposition of UNN staff toward environmental issues they encounter on social media. The data showed that they are well disposed to it. The mean statistic was 4.0. Data from item 13 showed that the participants would change an environmental, habit if such habit had health implications. The mean score was 4.7. Item 14 showed that the respondents could attribute some environmentally positive change in attitude to their exposure to social media. This was supported by a mean statistics of 4.4. Item

15 showed that, due to their participation and change to positive issues, the respondents feel that they are part of the effort at reducing environmental risk. This is statistically supported by a mean score of 4.7. Response to item 16 showed that the participants view themselves as agents of change towards environmental protection and agents of responsible behavior due to their positive change in attitude to environmental health issues. This data is statistically supported by a mean score of 4.3. Finally under this segment, response to item 17 showed that staff of the University of Nigeria, Nsukka believes that social media have empowered them towards taking responsibility for environmental health. This has a statistical support of 4.6 mean score.

Discussion of findings

Data has shown that, with regard to participating in issues concerning environmental health via the social medial, the

staff of the University of Nigeria Nsukka, participate. Data showed high acceptance in the mean score statistics. This has implication for national communication policy on social media as it relates to environmental health campaigns. The average mean score for items indicating participation was 30.5 the rule stated that any statistical level below 3.0. Therefore this is accepted.

The second research question sought to know the influence of social media on the environmental health behavior of university of Nigeria staff. Mean statistics for each of the items in the instrument, had a statistical support of mean score above 4.00 this shows a high statistic support, because the rule stated that, high level acceptance will be implied if an item in the questionnaire has a mean value greater than the minimum level of 3.0 Therefore findings showed that UNN staff are positively influenced in their pattern of behavior towards environmental health.

Summary and conclusion

The study set out to examine participation and behavior change patterns among UNN staff as a result of exposure to social media with regards to environmental health issues discussed on the social media. Two research questions were raised. Findings indicate that UNN staff use the social media to participate in discussions on environmental health. Also, findings show that there is a difference in staff pattern of behavior towards environmental health issues as a result of their exposure to the social media.

This study has shown that the increasing use of the social media for communication purposes creates a ready platform for its application in the field of environmental health as well as researches on social media induced participation and positive variability in behavior toward environmental health. Social media generates conversations and such conversations create communities of

well-informed individuals.

Recommendations

As a result therefore, the following recommendations are made:

- a. National policy on environmental protection should leverage on the potentials of the social media for their campaigns on environment protection, sustainability and health.
- b. National policy on health is encouraged to take advantage of the social media to reach the populace on health related issues.

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