

Climate change induced flash floods in federal capital territory, Abuja, Nigeria: Media shaping awareness?

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ABSTRACT: Devastating flash floods and uncontrollable soil erosion, largely fallout of the effects of climate change, have been taking their toll on Nigeria's Federal Capital Territory (FCT), Abuja. Apart from disrupting the ecosystem, their overwhelming effects are felt in the agricultural sector as farmlands are washed away. The media are expected to enlighten the residents of FCT, Abuja, about the impact of climate change. They have to be aware of global warming and its effects. Hence, this article sought to determine the level of awareness about the existence of climate change discourse among the residents of the FCT, Abuja; to ascertain respondents' perception about the media creating enough awareness around climate change and how it exacerbates flooding, and to confirm if the press is mobilising residents enough on how to mitigate flooding. The study was anchored on Status Conferral and Media Development theories. A questionnaire and question guide served as instruments for data collection. Findings showed that the FCT residents' awareness level about climate change was generally low, whereas improvement on the awareness level will result in activities that reduce flash floods; they perceived the media as not creating adequate awareness about climate change and educating the populace enough on how to mitigate the flash flood problem. In their sensitisation exercises, the media should partner with relevant government agencies and traditional rulers to educate residents on safety issues, particularly human activities that tend to exacerbate flash floods in the area.

KEYWORDS: awareness creation, climate change, global warming, media, flash floods

INTRODUCTION

Climate change refers to the process of greenhouse gases being released into the atmosphere as a result of industrialisation. Climate change occurs when the global temperature in the atmosphere and oceans rises, impacting rainfall patterns, arctic ice (and the northern jet stream that controls our weather), storm frequency and severity, growth seasons, humidity, melting polar and glacier ice, and sea level. On the other hand, climate variability refers to fluctuations in the mean state and other statistics, such as climate standard deviations and overall geographical and temporal scales beyond individual weather occurrences (Intergovernmental Panel on Climate Change – IPCC 2007; Elia, Stilwel, & Mutula 2015). As a result of climate change and variability, mean global temperatures are expected to increase from 1.4 to 5.8 degrees Celsius by 2100 (IPCC 2001). These increases have caused and will continue to result in erratic changes in rainfall, temperature, frequency, and intensity of extreme weather events and rising sea levels. They will affect human systems in many ways, including causing devastating flash floods that sweep everything in its path, fatalities, destroying lives and property here and there, and resulting in the loss of vast sums of invested funds disappearing. Patel (2021) reiterates that climate change exacerbates extreme flood events, and the study confirms that extreme flooding increases as temperatures rise. Climate change can also cause a change in atmospheric temperature, which can eventually lead to extreme weather events like flooding or landslides (Stanforth 2021).

Flood is a rampant natural disaster in most parts of Nigeria, and it has experienced deadly floods in its history. According to Adelekan and Asiyebi (2016), floods have been acknowledged as the most communal of all-natural disasters. They are liable for more than half of all the mortalities and a third of total economic losses from natural disasters. Olajuyigbe, Rotowa and Durojaye (2012) recognise floods as the most common environmental hazard in Nigeria, causing damage to lives and properties. Otaru (2020) reports that for upward of five years, parts of the Federal Capital Territory (FCT), Abuja, have been severely battered by the scourge of flood, even as the experience will continue to remain a nightmare in the memories of affected residents for a long time. Places like Karu, Lokogoma, Galadimawa, Giri, Gwagwalada, Trade More Estate, and other parts of the capital city are, most times, the worst hit by flooding. Lamenting the effects of flooding in the FCT, the Director, Department of Development Control, FCT, Muktar Galadima, specifically mentioned climate change as one major cause of its occurrence (Otaru 2020). This assertion is buttressed by Akilu (2021). Additional causes of the widespread flooding witnessed in the FCT include dumping of household refuse on natural drainage, building on green areas, building on flood-prone areas, on waterways and drainage, poor adherence to environmental laws, failure to obey government orders in line with the Abuja Master plan, as well as erection of structures by the river banks, amidst others.

Howbeit, the effects of flooding can be mitigated if the media create robust debate around it and broadcast timely and valuable information on it regularly. This is necessary because the press are endowed with what it takes to effectively confer status on topics, people or events, and cause the public to be aware of them, enlighten them

about such issues, and educate them where necessary. Media influence may be positive or negative, according to Orhewere and Kur (as cited in Agbi 2016), depending on the visuals sent, the tales filtered, the interpretations and signposts supplied, as well as the angle and direction in which the media mirror events. In an information-driven culture, the media's duty has been to use the instrumentality of communication to solve everyday issues, and this has acted as the mass media's most powerful function in many respects. Educating the public about climate change and flooding through the media will help to increase the public's knowledge and awareness about them. This is part of environmental communication. According to Nwabueze (2009), environmental communication keeps the public enlightened, educated, and informed about trends in the environment. It covers all forms of media reports (non-personal communication) and numerous personal communication strategies that engage and, where necessary, enrages the public over issues that affect the environment. Oden (2019) submits that, generally, all mass media organs in all established societies are expected to fulfil specific responsibilities, and these obviously would include creating awareness and mobilising public support towards governmental or public-oriented programmes.

Therefore, it means that the media have a role to play as agents of change. The media should be involved in development journalism, thereby disseminating messages to accelerate the awareness about global warming and steps to take to mitigate against its effects like flooding, to a remarkable level. Arlt, Hoppe, and Wolling (2011) agree that news-oriented media use has a positive influence on people's willingness to change their lifestyles to battle climate change. The World Health Organisation (WHO) puts it that "good health promotes development and development promotes health" (Uwon & Oloyede 2014: 84). It is the basis that this study looked at the relationship that exists between climate change, flooding, and the media. There are many challenges humankind faces today. Some are human-induced and self-afflicted, while some are natural. Climate change is one of the calamities humans have brought upon themselves due to their activities in depleting the ozone layer owing to massive carbon emissions into the atmosphere. This comes with devastating effects like flash floods, and soil erosion, among other damages. As a result of ignorance about climate change and its effects on humans and their environment, some people still partake in the activities that aggravate it. In the FCT, Abuja, there seems to be little awareness among its residents about climate change, and its impact is one of the causes of flash floods.

The media are saddled with the responsibility of educating the public about important issues like climate change and its link to floods; then, the questions that arise are: "are they creating enough awareness for the citizens to know what these are all about?" As expected of the media, are they letting the public know the implications of climate change on man's existence in the environment; what environmental risk global warming pose to the environment; how to apply/adapt themselves to it; and what efforts should be made to mitigate against the ravaging effects of flooding? These questions are necessary for light of Umejei's (2010) assertion that Nigeria risks the worst ravages of global climate change if most of its mass media continue in their present ignorance of the fundamental issues and the grave challenges they pose.

These are some of the issues this paper set out to address. The objectives are to (i) determine the level of awareness about the existence of climate change discourse among the residents of Abuja; (ii) ascertain respondents' perception about the media creating enough awareness around the climate change issue; and (iii) confirm from respondents if the media are educating residents enough on how to mitigate against flooding.

LITERATURE REVIEW

Theoretical Parameter

This study is anchored on Media Status Conferral and Media Development Theories. The Status Conferral Theory was postulated in 1948 by Paul Lazarsfeld and Robert Merton (Lazarsfeld & Merton 1948). According to Smith (2016), the status conferral function was developed when Lazarsfeld and Merton were describing the functions and power of the mass media in contemporary society. They say that the media have the power to compel so much information from anyone, at any time, about any topic and that they can make this topic appear to be the most urgent issue to date. Smith (2016) believes that the influence that the media play on the perception of a person, a group of people, or an event, whether justified or not, makes these things appear big or important.

According to the theory, the coverage given to specific personalities, people, ethnic groups, political classes, or professions causes the public to perceive them differently. "Status conferral," according to Lemert (2006), is the idea that news coverage singles out and elevates the covered person or organisation. Hence, Status conferral, or recognition by the mass media, indicates that one is important enough to single out from the mass and that one's behaviour and opinions are significant and sufficient to demand media attention. By legitimating the status of individuals and groups, the media confer status and prestige (Severin & Tankard 2001: 327).

Furthermore, because media draw attention to individuals, subjects, and issues, Asemah (2011) believes that the media perform a status conferral role by providing importance to topics and persons. The focus creates a sense of importance; however, it can occasionally be excessive. It implies that the media may elevate a person, event, or organisation to the point where public members begin to see that person, event, or institution as highly significant (Guanah 2021). Media status conferral occurs when they use the tools of priming and framing to bestow prestige, clout, and importance on a person(s) or event. It might be a planned or inadvertent action. This may happen when they're doing their jobs, which include informing, educating, and entertaining the public, among other things. This is following Ayakoroma's (2018) assertion that once the media takes on an issue and is critical of it, "there is the likelihood of the mass audience looking at such issues from that perspective" (p.7). Ibagere (2010) also believes that the media can draw attention to itself and that they also have "have the tremendous power to direct this attracted attention on a single event or phenomenon" (p. 21).

Without a doubt, climate change affects the entire human race, including the residents of Abuja. However, the effects are not widely known since people are not suffi-

ciently aware of them. This might be because the media have not given them priority reporting or created an agenda around the global warming discourse by bestowing status on it. Therefore, this theory is relevant to this study. It is significant because the media's responsibility is to elevate climate change's position in society and analyse its effects. When the media elevate the discourse on global warming and climate by creating massive awareness about it, society benefits.

The Development Media theory was propounded in 1987 by Dennis McQuail. Anaeto and Sol-Anaeto (2010: 63) explain the principles of the theory thus: Media must accept and carry out positive development tasks in line with established national policy; freedom of the media should be open to economic priorities and development needs of the society; media should give priority in their content to the national culture and languages; media should give priority in news and information to links with other developing countries.

This theory can be traced to the report of the commission set up by the United Nations Education, Scientific, and Cultural Organisation (UNESCO) in response to the complaints of the developing countries about their negative portrayal by the western media. The report revealed that Third World countries are faced with specific communication problems such as the absence of communication infrastructure, lack of professional skills and resources for the production of media products, and absence of cultural resources and the available audience. Explaining the theory in detail, McQuail (2010) opines the media must accept and carry out positive development tasks following naturally established policy; media freedom should be open to economic priorities and societal development needs; media should prioritise national culture and language in content; journalists and other media workers have responsibilities as well as freedom in their information gathering and dissemination tasks, and the state has the right to impose restrictions on the media in the interest of development.

According to Anaeto and Sol-Anaeto (2010), the Development Media theory advocates that the media in developing countries should pursue development goals for their countries. The core of this theory is that the media in developing countries should do all in their ability to promote and participate in all activities that can contribute to the national development plans of developing nations like Nigeria by ensuring that they assist the government in implementing her development policies. Further, Baran and Davis opine that the development media theory calls for "government and the media to work in partnership to ensure that media assist in the planned beneficial development of the country" (as cited in Guanah 2021: 9). Therefore, the role of the media under this theory is to discuss and inform by creating awareness, motivating people, and creating an environment in which target social systems can feel the need for and demonstrate their commitment to development activities. Consequently, the theory becomes important in environmental coverage by the media about climate change. Hence, it is pertinent to this study because it enabled the study to understand how the mass media can be used to aid development, in this case, how they can be deployed to create awareness about climate change and its effects on man and his environment.

Climate Change and Flooding

Climate is described as the typical weather conditions for a certain location or region based on long-term averages of rainfall, temperature, wind, and humidity rates over 30 years or more (Yanda & Mubaya 2011). Various sources cause climate change, according to Climate Change Challenge.Org (as cited in Batta, Ashong, & Abdullahi 2013), including the combustion of fossil fuels, changes in land use through agriculture, and deforestation; carbon dioxide, methane, nitrous oxide, and greenhouse gas emissions. According to Pucharis (2007), per capita carbon dioxide emissions in Africa were one ton (tCO₂), compared to 19.9 tCO₂ in the United States. Climate change, which is sometimes exemplified by extreme weather and sea-level rise, has been largely implicated as a core cause of flooding which Denchak (2019) defines as “the accumulation of water over normally dry land. It’s caused by the overflow of inland waters (like rivers and streams) or tidal waters, or by an unusual accumulation of water from sources such as heavy rains or dam or levee breaches” (p.1).

Although there are many causes of flooding, however, it is a truism that climate change amplifies flooding, as attested to by IPCC, which, in its special report on extremes, confirms that climate change “has detectably influenced” several of the water-related variables that contribute to floods, such as rainfall and snowmelt (as cited in Denchak, 2019). There are various types of floods, but the most common, according to Denchak (2019), is River Flooding: this takes place when a river or stream overflows its natural banks and inundates normally dry land); Coastal flooding: this occurs when winds from a coastal storm, such as a hurricane or a nor’easter, drive a storm surge—a wall of water—across the land; Urban flooding: this happens when rainfall (rather than an overflowing body of water) overwhelms a densely populated area’s local stormwater drainage capacity. When rainwater runoff from roads, parking lots, buildings, and other impervious surfaces is diverted into storm drains and sewers that can’t manage the volume, this happens. However, this study is more concerned with flash floods that the federal capital territory, Abuja suffers from.

According to Denchak (2019), flash floods are rapid-rise floods induced by strong precipitation in a short period (usually six hours or less). According to him, it may happen everywhere, but low-lying places with inadequate drainage are most vulnerable. Dam or levee failures, or the quick surge of water owing to debris or ice jams, can also create flash floods. Flash floods combine the inherent dangers of a flood with the speed and unpredictability of a tornado, and they are responsible for most flood-related deaths. Flooding can be exacerbated by climate change due to increased precipitation. This is a condition in which a warmer environment stores more water and then discharges it. Although heavy rain does not always result in floods, it does have the propensity to raise the risk of flooding. Flooding may result in death, extensive property damage, road, bridge, utility, and other public infrastructure damage, as well as pollution and illness. Floodwaters can transport raw sewage, harmful chemicals released from hazardous waste sites, and runoff from industrial farms. They can contaminate drinking water sources and cause illnesses in the eyes, ears, skin, and gastrointestinal tract. When the floodwaters recede, germs and mould may persist, leading

to an increase in respiratory ailments like asthma. Flooding can also cause mental health issues, economic losses (such as lost business or pay), and uprooting of whole populations (Denchak 2019).

Media and Awareness Creation

Reporting about climate change falls under environmental communication because of its enormous effects on the environment. Global warming affects rainfall patterns, arctic ice (and the northern jet stream that drives our weather), frequency and intensity of storms and droughts, growing seasons, humidity, melting polar and glacial ice, and sea level (IPCC 2007). It causes flash floods too. Meisner (2007) describes environmental communication as “all forms of communication (interpersonal, group, public, or organisational, mass, computer-mediated, etc.) that engage with the social debate about environmental issues and problems” (p. 3). This type of reporting is also referred to as environmental news reporting. According to Nwabueze (2009), environmental reporting entails disseminating information, news events, occurrences, informed discussions, etc., about the environment to an audience through a medium. It simply reports on issues, developments, happenings, etc., about the environment (p. 197). Hence, findings from a comparative study by Schulz (2003) focusing on different European countries display positive correlations between the media usage and environmental awareness of EU citizens show that media usage is the strongest variable in explaining environmental awareness for the case wherein people have no personal experiences with environmental problems.

The media are also involved in risk communication, described by Höppner, Buchecker and Bründl (2010: 45) as a social process that is dependent on the characteristics of the message, the sender, the audience, the social context of the communication, the characteristics of the hazard itself, and the mode/channel in which it is delivered. Instead of dealing with events whose type and scope are known in advance, risk communication deals with unknown outcomes and the chance or probability of repercussions occurring. When it comes to flooding, risk communication is to make people aware of and prepare for floods to avoid or minimise the harm or damage they may bring. As a result, Kievik and Gutteling (2011) argue that people who have access to flood risk information are more likely to take preventive actions. As Folarin (as cited in Uwom & Oloyede 2014) rightly puts it, “the media should accept and carry out positive development tasks in line with nationally established policy (or in line with national ideology) without prejudice to their traditional functions of information, education, and entertainment” (p. 84). This is in line with the media development theory adopted for this study. According to McQuail (2010), the media are meant for positive uses towards developing every sector in the country. Therefore, environment-wise, the media should not only cause the public to be aware of the devastating effects of global warming on the environment but should educate them on steps to mitigate such effects as flooding in the surroundings. This is another means of covering developmental issues.

Kakade, Hiremath and Raut (2013) opine that climate change communication from scientists and policymakers to the public via the mass media has been a subject of

significant interest because of its implications for creating national variation in public understanding of a global environmental issue. Therefore, while assessing the role of media in creating awareness about climate change in Bijapur city, they revealed that the media know the significance of covering environmental issues and that all media like TV, radio, newspaper and new media spread the news and information at the speed of light. The media serve as the megaphones that magnify events that were known by only a few people to reach a larger heterogeneous audience that is spread out in different locations depending on the means being used in disseminating the information (Guanah, Obi & Akumabor 2020: 180). Therefore, society relies on the media for vital information about climate change, and that will be useful in mitigating flash floods supposedly caused by climate change. Hence, the media should help educate the general public on how to go about it in their own small and individual ways by creating awareness about climate change and providing relevant information on how to tackle it. Though the media should always issue a high alert on the prospect of severe flooding within the territory, they must task residents to take personal responsibility for the safety of their environments to mitigate any possible effects of flooding in the FCT. The public should know that as little as their bush burning activities can contribute to climate change accentuation.

To mitigate the impact of heavy floods in the Federal Capital Territory (FCT), the media must begin to prepare the public for emergency response by creating adequate awareness about the impending flood, which may result from climate change and ensure they pay heed to early warning. If there was a need to move from flood plain areas, they should do so. The Real Estate Developers Association of Nigeria (REDAN) operations are alleged to be worsening flooding in the FCT by erecting illegal constructions that impede rivers and severely damage the city's drainage system. To avoid falling prey to the antics of unscrupulous developers, residents should always conduct due diligence by checking with the relevant authorities in the Federal Capital Territory Authority (FCTA) to see if developers met the master plan requirements before buying houses or taking possession of properties from them. The media must continually remind the FCTA to increase its enforcement and regulation activities to ensure that acts that constitute violations of the FCT master plan are nipped in the bud before they become a major problem. To ensure compliance, the government should demolish the illegal buildings blocking the free flow of water but pay compensation to the owners of such property where the building plans were genuinely approved by the necessary government agencies before they were erected.

METHODOLOGY

The study adopted a survey research design while a questionnaire and question guide were used as instruments of data collection. This study involved collecting and describing data obtained from a population to determine the role of the mass media in the climate change discourse. Nworgu (2006) asserts that a survey design is one in which a group of people or items are studied by collecting and analysing data from only a few people or items considered to be a representative group of the entire popu-

lation. The study population is made up of adult males and females in the Federal Capital Territory, Abuja, Nigeria. The population of adult males and females in the Federal Capital Territory, Abuja, Nigeria, according to the Federal Republic of Nigeria Official Gazette (2009), is 1,406,239. The population of the study is, therefore, 1,406,239. The sample size for the study is four hundred and twenty-three (423) respondents. The sample size was arrived at using Cochran's formula for sample size determination. Cochran (as cited in Asemah 2013) developed a statistical formula for the determination of sample size:

$$No = \frac{Z^2 PO}{e^2}$$

Where:

No = Initial estimate of sample size

Z = The abscissa of the normal curve that cuts off an area at the tails.

P = The estimated population under consideration.

e = The desired level of precision or margin of error.

Note:

If $\frac{No}{Population}$ is negligible, then No is satisfactory, if

N is obtained as follows $N = No / \frac{1+no-1}{N}$

Where:

n = Sample size and

N = Population

Using the Cochran formula, the sample size will be calculated as follows:

$$No = \frac{Z^2 PO}{e^2}$$

Where:

Z = 1.68 (from normal distribution table)

P = 40% or 0.4 (Assumed)

Q = 1 - 0.4 = 0.6

E = 100% - 99.96% or 0.04%

N = 1,406,239

$$= \frac{1.68^2 \times 0.4 \times 0.6}{0.04^2}$$

$$= \frac{2.8224 \times 0.24}{0.0016}$$

$$= \frac{0.677376}{0.0016}$$

$$= 423$$

$$\frac{No}{Population} = \frac{423}{1,406,239}$$

$$= 0.0003 \text{ (i.e. Negligible)}$$

Hence, the sample size of 423.

The Federal Capital Territory is made up of six area councils, namely: Abaji Municipal Area Council, Abuja Municipal Area Council (AMAC), Bwari Municipal Area Council, Gwagwalada Municipal Area Council, Kwali Municipal Area Council, and Kuje Municipal Area Council. The sample size of 423 was divided among the six municipal area councils, with each having 70, but Abuja Municipal Area Council having 73 because it is the most populated of all the councils. The researchers adopted the multi-stage sampling technique to select the respondents. The six municipal area councils were subdivided into electoral wards. Three electoral wards were selected from the six (6) municipal area councils using the simple random sampling technique; this made a total of eighteen (18) electoral wards. In administering the questionnaire to the respondents, the researchers adopted the simple random sampling method. The researchers determined the number of streets in each ward and the number of houses in each of the streets. They systematically selected five streets from each ward. The 1st, 5th, 10th, 15th, and 20th houses in each street were selected from the streets se-

lected.

A simple random sampling method was adopted so that every house had an equal opportunity of being selected. Respondents were purposively selected from each house. The male and female adults capable of responding to the questionnaire were chosen in each house. The researchers administered the copies of the questionnaire with the help of three-trained research assistants. The eighteen (18) wards were divided into three (3), and each research assistant was assigned to six (6) wards. From each council, two respondents each (making 12) were purposively selected for oral in-depth interviews. Out of the 423 copies of the questionnaire administered, 393 copies (95.62%) were retrieved in usable form. Reliability was measured as a pilot study with 10% of the sample size using Holsti's coefficient of reliability; thus: $CE = \frac{3M}{N1+N2+N3}$, and the percentage of intercoder agreement and coefficient of reliability yielded 97.9%. The figure is rounded to 98%. To ensure the validity of the survey instruments, face validity was established. After that, the instruments were subjected to review independently by the researchers.

RESULTS AND DISCUSSION

The analyses below were obtained from the questionnaire administered to respondents of the target population of this study in FCT, Abuja, Nigeria.

Characteristic	No	%
Sex		
Male	293	74.55
Female	100	25.45
Age		
18-23	21	5.34
24-29	75	19.08
30-35	138	35.12
36-above	159	40.46
Marital Status		
Married	319	81.17
Single	69	17.56
Divorced	5	1.27

Table 1. Demographic Characteristics of Respondents

Source: Field Survey 2022

Table 1 indicates that most of the respondents were male (74.55%), that the ages of majority are 30 years and above (75.58%), and that 81.17% are married. The implication is that they are capable of responding to the questionnaire administered to them.

Characteristic	No	%
Occupation of Respondents		
Students	14	3.56
Business	146	37.15
Public/Civil Service	112	28.50
Self-employed	86	21.88
Others	35	8.91
Religion		
Christianity	150	38.17
Islam	160	40.71
Traditional	39	9.92
Others	44	11.20
Education		
Primary education	12	3.05
Post Primary education	100	25.45
Tertiary education	181	46.06
Postgraduate education	73	18.57
Others	27	6.87

Table 2. Demographic Characteristics of Respondents

Source: Field Survey 2022

From Table 2, it can be seen that the respondents include government workers and privately employed individuals. Also, the respondents cut across various religions, and the majority of them are literate. The inference is that floods do not discriminate based on employment, religion, or education qualifications when they unleash their mayhem on people.

Presentation of Data from Questionnaire

Level of Awareness	Frequency	%
Very High	49	12.47
High	74	18.83
Undecided	10	2.54
Very Low	66	16.79
Low	194	49.37
Total	393	100

Table 3. Level of awareness about Global Warming by residents of the FCT, Abuja

Source: Field Survey 2022

The data in Table 3 indicate that the awareness level of the residents of the FCT, Abuja, about global warming/climate change, is generally low.

Responses	Frequency	%
Strongly Agree	106	26.97
Agree	89	22.65
Undecided	21	5.34
Strongly Disagree	28	7.12
Disagree	149	37.92
Total	393	100

Table 4. Respondents' perception about the media creating enough awareness around the climate change issue

Source: Field Survey 2022

The interpretation of the data in Table 4 is that a larger percentage of the residents of the FCT, Abuja do not agree that the media are creating enough awareness around the climate change discourse.

Responses	Frequency	%
Strongly Agree	105	26.72
Agree	88	22.39
Undecided	5	1.27
Strongly Disagree	47	11.96
Disagree	148	37.66
Total	393	100

Table 5. Agreement as to whether the media are educating residents enough on how to mitigate against flooding

Source: Field Survey 2022

The implication of Table 5 is that FCT Abuja residents do not fully adjudge the media as adequately educating them on how to mitigate flooding.

The first objective of this study was designed to measure the awareness level of the FCT residents about climate change. The finding revealed that the awareness level was generally low, whereas improvement on the awareness level will result in activities that reduce flash floods. Similarly, in an oral interview with Suleiman Mohammed, a resident of Kuje, in the Kuje municipal council area, he claimed ignorance of knowing anything about climate change and its effects. He said he sees the flash flood that they experience almost every year as a regular occurrence that must take place during the rainy season. This is regardless of Boykoff (2020) observation that we are living through historical times as we essentially contend with issues surrounding digital cultures and communications about climate change and that there are many inspiring signs of productive intersections between digital cultures and climate change. This finding tends to support the views expressed by Umejei (2010), that the media in Nigeria appear to be relatively aloof in the matters of creating awareness on climate change issues, thereby making Nigeria risk the ravages of global challenges posed by climate change. He feels the Nigerian media seem to lag in the awareness campaign on climate change. Umejei (2010) emphasises that most Africans are not informed on

climate change and that the media have the urgent duty to assume a prominent role in creating awareness on the issue.

Also, the finding fell short of the expectations of Kakade, Hiremath and Raut (2013), who think that the severe effects of climate change demand that there should be very urgent creation of awareness about its causes and impacts and this duty is left for the media. There is a great need for awareness creation on the issue of climate change by the media. Moemeka (2009) believes that development media theory plays a role in transformation and socialisation. The media get the public aware of environmental problems caused by climate change so that they can know better how to deal with them. That means screening can occur in communication at several levels in the media hierarchy.

The second objective of this study which was to ascertain respondents' perception about the media creating enough awareness around the climate change issue, showed that 45.04% of the residents of the FCT, Abuja, do not agree that the media are creating enough awareness around the climate change discourse. This finding is in contrast with the stand of Prabhanjan Yadav and Rapaka Jhansi Rani (as cited in Kakade, Hiremath, & Raut 2013) that the media play vital roles in educating and enlightening the people and the governments on how to protect and preserve natural resources in the interests of future generations and the climatic chaos. For this reason, media play a pivotal role in creating awareness and bringing positive behavioural change among people in mitigating anthropogenic climate change. Istifanus Morgan, a university lecturer resident in Gwagwalada, in Gwagwalada Municipal Council of the FCT, admits that the media in other countries do take time to create awareness about climate change for their citizens to understand what it means. When he travelled to a European country, he witnessed the media drawing the public's attention to the damning effects of climate change and global warming. He compared his experience abroad to that of Nigeria, where he said the media are not doing enough to let the populace know about all the global warming entails.

Ayittey (2010) also opines that climate change is a phenomenon for which the public has to be educated on nature and how to cope with the situation and that it is the media that have the clout to inform their audience on the subject. The press must sensitise the public by creating awareness and educating them on how to prevent flash flooding in little ways like properly disposing of their refuse by not dumping them in drainages, etc. They have to empower the people with useful information, enlighten and educate them on climate change and its effects. After reporting on climate change issues, especially in cases where there was an infringement of environmental law, the media should embark on post-report surveillance to monitor compliance by stakeholders and call them to order if any deviation from laid-down rules is noticed. The public needs constant sensitisation and enlightenment from the media for the issue of climate change to be properly understood.

From the third objective, which was designed to confirm from respondents if the media are educating residents enough on how to mitigate against flooding, 49.62% of the FCT Abuja residents do not fully agree that the media are sufficiently educating them on how to mitigate against flooding. This is even though the importance of

flood risk information and its use as an early warning method to prevent floods cannot be overstated, and that risk communication is ineffective unless the target audience hears the message, understands it correctly, and acts on it (Nwafor 2021). As a result, the media must publish and analyse flash flood stories as soon as possible, breaking them down for the general public to comprehend. Joseph Mustapha of Abuja Municipal Area Council disclosed during an interview that most of the residents of the FCT are usually confused and do not know what to do to mitigate flooding when it comes to ravaging their locale. He said if the media or any organisation educated them on what to do in such situations, they would adopt their suggestions, lamenting that flooding has robbed them of a lot of their property.

The media can help residents prepare for a flood in advance, saving lives and property. Most European nations have flood insurance plans; if they are available in Nigeria, the media should inform the public about them. They should also inform the public that they must determine how they would contact family and friends, as well as where they will stay, in the event of floods. Since flash flooding in the Federal Capital Territory, Abuja is a regular occurrence. The media must train inhabitants to anticipate floods every year and prepare themselves, whether it occurs or not. The media should educate the residents to prepare necessary commodities like food, bottled water, first-aid kits, medications, and their phones and other communication devices ahead of time. Those living in flood-prone regions should be told to evacuate to higher ground during rainy seasons, as the Nigerian Meteorological Agency (NIMET) warns. The public should be reminded of these issues through the media regularly. Just as Denchak (2019) advised, the media ought to remind citizens that if they must evacuate, they should remember to take “the five Ps”: people (the most important), prescriptions, paper (birth certificates, passports, and other key documents), personal needs (clothes, phones, and phone chargers), and priceless items (irreplaceable mementoes) along. They should turn off their gas, water, and electricity; they should put sandbags around the property, and they should avoid walking, swimming, and driving through floodwaters, which may be powerful and also hide hazards, such as downed (and possibly live) power lines, broken glass or metal, and contaminants like sewage and chemicals.

CONCLUSION

The findings of this study revealed that the awareness level about climate change is low in the FCT, Abuja, and by extension, around Nigeria. This indicates that the media are not doing enough to create awareness about global warming and how to mitigate flash flooding, which is one of the effects of climate change. This should serve as a wake-up call to the media to enlighten and sensitise the public about climate and its menace. Without a doubt, if climate change is brought under control, it will go a long way to curb the incidents of flooding, not only in the FCT but across Nigeria and elsewhere. Although it will not be possible to entirely prevent flooding in the FCT, Abuja, however, the various regulatory bodies that have one thing or the other to do with the environment should do the needful by ensuring that building laws are strictly

adhered to and that nobody, no matter how highly placed the person may be in the society, flouts the law by building on areas mapped out as green areas, and building on drainage paths. Based on the findings, the following recommendations are made: (i) Community sensitisation awareness campaigns by the relevant FCT authorities in collaboration with media houses should be organised to draw attention to the issue of climate change and mitigate flash floods. (ii) Apart from the significant ways through which the media create awareness, campaign rallies should be embarked upon. Mobilisers should march out with banners, small flags, and handbills/flyers to distribute to people on the streets, in their shops and in offices to enhance knowledge about climate change among the populace. (iii) In their sensitisation exercises, the media should partner with relevant government agencies and traditional rulers in the FCT to educate residents on safety issues, particularly human activities that escalate flooding. Most of their reports should emphasise how to mitigate flooding. In addition to the conventional media, folk or traditional media such as dance, drama, music, and songs should be employed to create awareness about climate change because they resonate more with the local people in the area under investigation.

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