An Examination of Students' Preparedness for Fire Emergency and the Role of Social Media: A Case Study of Students' Hostel Ahmadu Bello University, Zaria Kaduna State

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Abstract: *Social media are Internet-based applications that promote high social interaction and user content generation often at a one-to-many or a many-to-many scale. In line with this, the study was carried out to examine students' preparedness for fire emergency and the role of social media in students' hostel of Ahmadu Bello University, Zaria main campus. The study aimed at identifying common and remote causes of fire disaster, preparedness facilities and equipment in the study area and identifies the role of social media in fire disaster awareness in the study area. There are seven hostels in the main campus. One hundred and thirty five questionnaires were correctly filled and used for the analysis given a response rate of 90%. Statistical package for social sciences version 20 was used for the analysis of data collected using graphs and bar charts. The result showed a low level of awareness on safety and preparedness against fire disaster, though the students have vast knowledge about social media. The study recommends that the University management should ensure that all the hostel residents adhered to rules and regulations governing the halls, there should be effective and efficient fire fighting equipment in the various hostels and the University ICT unit should use social media platforms like the Facebook, Twitter, Watsapp group in dissemination of information and creating awareness on fire safety and its prevention.*

Keywords: Fire Emergency, Social Media, Students' Preparedness

INTRODUCTION
Fire has been a cause of comfort and at the same time catastrophe for mankind. Among all disasters known to man, fire disasters are the most prevalent on a global scale. Worldwide, fires are hazards with Nigeria herself suffering from such events, frequently displacing hundreds of people and destroying lives, property and livelihood (Blackaby, 2007). Each year, more than 400 Nigerians die in fires, more than 25,000 are injured in fires, and more than 10 fire fighters are killed while on duty (NEMA, 2011). The dictionary of fire technology defines it as "a process of combustion characterized by heat, smoke, flame, or any combination of these." It can be seen as a rapid oxidation of materials in the exothermic chemical process of combustion, releasing heat, light, and various reaction products (Makama, Joshua & Makama, 2014). Cohen (2005) considers it as "an uncontrolled process of burning in a place not intended for it which may cause health hazard and life threat as well as considerable material losses. But the question here is 'how much is the human life worth in our dear society?' This question has become necessary considering the spate of avoidable catastrophes in which scores of lives perish, properties worth billions of Naira get destroyed and the environment degraded. Fire disasters cause great loss of lives and property. In the year 2017, more than 300 Nigerians died in over 560 fires recorded with more than 25,000 injured in the fires, and property worth over 7.7billion Naira was lost in the process (NEMA, 2011). The vulnerability and what disaster analysts call "risk burdens" of communities and countries are being increased through a myriad of everyday development decisions at individual, local, national and international levels. It was in the light of this that the former United Nations Secretary General, Kofi Anan argued that, populations

are too often being concentrated in risky areas such as flood plains. In addition, the destruction of forests and wetlands is harming the capacity of the environment to withstand hazards. Looming above all this is the threat of global climate change and rising sea levels as a result of increased greenhouse gas concentrations in the atmosphere caused by human activity (International Federation of Red Cross and Red Crescent Societies, 2013).

In recent times, fire disasters have particularly become incessant that they are now a daily routine. The reality of the fire explosion that rocked the heart of Lagos on December 26, 2012 killing at least one person and destroying over a dozen residential buildings was still evident when the following day the news broke that the abode of former president Olusegun Obasanjo was on fire. The same day, the Radio House, Federal Radio Corporation of Nigeria got burnt. The Sabon Gari Zaria's Market inferno of January 2, 2015 left a trail of devastation as over 300 shops with the merchandize were reduced to ashes (ABU Fire Service Report, 01/2015). Elsewhere in the nucleus of Kano metropolis, on Thursday, April 2, 2015, the Kano State Resident Electoral Commissioner, Alhaji Abdullahi Minkaila was burnt to death along with his wife and two daughters in an inferno when his residence was engulfed by fire. Similarly, in February 11, 2013 at Number E36, Fakere Street, Kakuri, Kaduna, five children of the same parents were burnt to death. Consequently, the annual fire statistics coming from the various states of the federation are equally frightening. In the Rivers State for instance, the government announced that no fewer than 230 lives were lost, 73 others suffered various degrees of injuries in 222 fire incidents recorded in the year 2012. Another statement from the Oyo State Fire Service Department indicates that, while 38 people lost their lives, properties worth about ₦1.78 billion were destroyed in 617 fire incidents recorded in the state in the year 2013. The 2014 records obtained from the office of the Deputy Director, Planning, Research and Statistics, Plateau State Fire Service shows that 117 human lives were lost and about ₦1.97 billion worth of properties were consumed in 358 recorded fire incidents.

In the year 2014, as reported by the National Fire Statistics' Data Collection Centre, Abuja, the Federal Fire Service (Abuja and Lagos) responded to a total of 569 fires and 201 rescue operations, in which 288 lives perished, and an estimated property loss of about ₦7.743 billion. The statistics further shows that about 44.64% resulted from unknown sources, 19.16% from electricity orientation source, and 9.67% from Gas/Special Services. 0.53% involved Educational Establishments taking about 0.40% of the total loss of the year, (Aminu, Usman, Alkali & Elnafaty, 2014). This trend is worrisome considering its impacts on the socio-economic wellbeing of the society. Hence, it can be said that the cost of fire disasters is sad. It brings unimaginable pains and even death to its victims, wastes time and resources, causes damage to equipment and structures and degrades the environment distorting the soil characteristics and nature, land use, land cover and of course the climate as well as biodiversity. It is however, disheartening facing the fact that most of these disasters are far from being natural, but the products of human errors of commission or omission and carelessness. To buttress this point, Aminu, Usman, Alkali & Elnafaty (2014) opined that Nigerians' attitude to accident prevention is lethargic. Most of these fire disasters could have been avoided or at least have their impacts reduced to the barest

minimum if only people had been more safety-conscious. It is only in this part of the world that residents store highly flammable liquids such as Petrol in their living rooms. The Lagos December 26, 2012 fire disaster was said to have resulted from explosion of tones of fire crackers in a warehouse in the crowded commercial centre. This can be said to be reckless. Fire outbreaks are associated with a variety of factors connected with human activities, accidents and natural occurrences. However, the potential of fire outbreaks is determined by the ignitability of residential/wild land area and the presence of certain conditions conducive to combustion. Such conditions include the combination of fuels, weather and topography which provide the potential for extreme fire behaviour (Cohen, 2005). In order to curtail high incidence of fire disaster in the country, the National Emergency Management Agency (NEMA) has commenced awareness campaigns on fire prevention, mitigation and preparedness as part of its Disaster Risk Reduction measures (NEMA, 2012). The coordinator explained that most disasters could be prevented or mitigated through changing the values, cultures and practices of the people. He also noted that the best agent to attitudinal change is sensitization and awareness. He said high rate of fire incidence around had led to loss of lives, properties and livelihood necessitating the provision of relief materials at huge cost which could have been avoided or utilised for developing communities (NEMA, 2012). Though many people know the major causes of fire disasters, the best fire fighting technique is prevention and the best way to prevent it is to create awareness among the people not to allow fire to start (Asari & Umaru, 2015). In this regard, it becomes paramount that tools for awareness creation be utilized. This is where the media comes to play as tools for awareness creation. There are various forms of media, one of which is the social media.

Social media consists of tools that enable open and online exchange of information through conversation, interaction and exchange of user generated content (Abbasi, Hossain, Hamra, & Owen, 2010)). Unlike traditional ICTs, Social media manages the content of the conversation or interaction as an information artefact in the online environment (Facebook, 2012). Social media allows people to establish connections and links with other individuals who are similar to them, or whom they find interesting. Users can post news or links, discuss them and share their opinions during real times. The social media can be utilized to mobilize and organize populations in order to achieve various objectives, and update them with the most up-to-date information, which might not be available through alternate official channels (Abbasi, Hossain, Hamra, & Owen 2010)). During natural disaster, social media provides access to relevant and timely information from both official and non-official sources and facilitates a feeling of connectedness (Facebook, 2012). This connectivity with loved ones and the community provides reassurance, support and assistance to potentially distressed individuals and populations (ISDR, 2006). Social media tools, especially Facebook and Twitter, are taking an ever growing part in disaster response (Ahmed, 2011). Social media during disaster and emergencies was initially utilized by the general public to communicate, and is now being adopted by emergency responders, government and non-governmental organizations as an integral part of disaster management. Given the increasingly important information role social media plays during disasters, it is essential to understand what is known about social media use during

disasters and what remains to be tested. Otherwise, policy makers and emergency managers risk making disaster communication decisions based on intuition or inaccurate information. Economic losses as a result of destruction of property and injuries from fire emergencies in Ahmadu Bello University Zaria and its environs are increasingly common. Makama, Joshua and Makama (2014) argues that "Fire safety in students 'accommodation' cannot be over emphasized, although, many institutions in Nigeria have given less attention to the program; despite its importance and the devastating effect of fire, thus may result in loss of lives and properties."

The study therefore becomes imperative due to the need to assess the level of fire emergencies and that of the risk of such emergencies triggering a fire disaster, as well as identification of highly vulnerable points within the hostels. This is with the view to articulate recommendations that would help in bringing down the rate and effects of fire emergencies or at least keeping such emergencies from escalating into full-fledged disasters via the use of social media. The main purpose of this Study is to assess how the social media is instrumental in fire disaster awareness in the students' hostel at the main campus of Ahmadu Bello University, Zaria. Specifically, the Study achieves the following objectives;
- **i.** To identify the remote causes of fire disaster in the study area.
- **ii.** To identify the common methods of extinguishing fire outbreaks in the study area.
- **iii.** To identify the role of social media in fire disaster awareness in the study area.

Research Questions
The Study provided answers to the following research questions:
- i. What are the remote causes of fire disasters in the study area?
- ii. What are the common methods of extinguishing fire outbreaks in the study area?
- iii. What are the roles of social media in creating awareness about fire disasters in the study area?

METHODOLOGY
Given the fact that the population embraces a number of distinct categories, the frame was organized into separate "strata," which was further divided into substrata. Each sub stratum was then sampled as an independent sub-population, out of which individual elements were purposely selected to establish the sample size. The classification of the halls was done by the researcher who grouped the halls in the University into Classes A and B as males and females hostels respectively. The on-campus male students are resident in Suleiman, ICSA/Ramat, and Danfodio Halls while their female counterparts are in Queen Amina and Ribadu/Alex Halls. The Akenzua Hall is of Post Graduate students, while the Sassakawa Hall is a mixed hall. The two classes were further classified into a substrata as A, B, C, D, E, F, & G; where 'A' is Icsa/ Ramat Hall; Class 'B' is Oba Akenzua Hall; Class 'C' is Queen Amina Hall; 'D' is Ribadu / Alex Hall; Class 'E' is Sassakawa Hall; Class 'F' is Umar Suleiman Hall and Class 'G' is Usman Danfodio Hall. These classes formed the substrata from which Questionnaires were administered. The target population for this study comprised of 13009 students resident in Suleiman, ICSA/Ramat, Danfodio, Queen Amina, Ribadu/Alex, Akenzua and Sassakawa (ABU MIS, Statistics of

Registered Students 2015/2016 session as at 25/08/2016). 150 copies of questionnaires were administered to respondents in the study area based on the sub stratified zones. However, 135 copies of the questionnaire were correctly filled and returned. Thirteen were not returned, and two questionnaires were invalid. Purposive sampling was used to select respondents who were thought to be relevant to the data needed. Such as Fire fighters and Safety officers. However, a face-to-face interview was granted to the University's Fire Service expert, to know the preparedness facilities and equipment available in the study area. Questionnaire instrument was used as the main tool while interview was used as supplementary instrument to collect data for this study; hence the questionnaire was capable of generating data in large volume while the interview was able to gather information not covered by the questionnaire The questionnaire instruments were administered to the respondents in their various halls between the hours of 4pm to 8pm for 3 consecutive days, while the face-to-face interview was conducted as at 10am for 2 days. Microsoft excel 2010 was used to analysed the data collected. The results of the findings were generated, interpreted and presented in bar charts and graphs.

RESULTS AND DISCUSSION
Research Question 1
What are the remote causes of fire disasters in the study area? The result in figure 1 shows that 49.6% of the causes of fire disaster in the study area were due to electrical fault, 2.2% were due to arson/intentional, 6.7% were not known and 41.5% of no experience. This implies that the electrical cables and wires should be properly fixed and put in place to avoid short circuiting and overheating of the wires which may lead to sparks. This finding agrees with Nigerian Emergency Management Agency (2011) which pointed out that, Ahmadu Bello University, Zaria is generally vulnerable to a variety of hazards; however electrical faults and lack of awareness in fire disaster prevention has become a serious threat to the university fragile economy. Ahmadu Bello University, Zaria (2010) emphasized precautions against fire outbreak to include: avoid leaving cooking unattended, Do not leave switch-on electrical equipment and appliances unattended, Do not modify electrical equipment and appliances by yourself, Do not overload electrical wiring and socket, Do not store unauthorized inflammable goods as well as avoid tampering with fire fighting equipment among others.

Figure 1: Remote Causes of Fire Outbreak in A.B.U Main Campus Students' Hostels
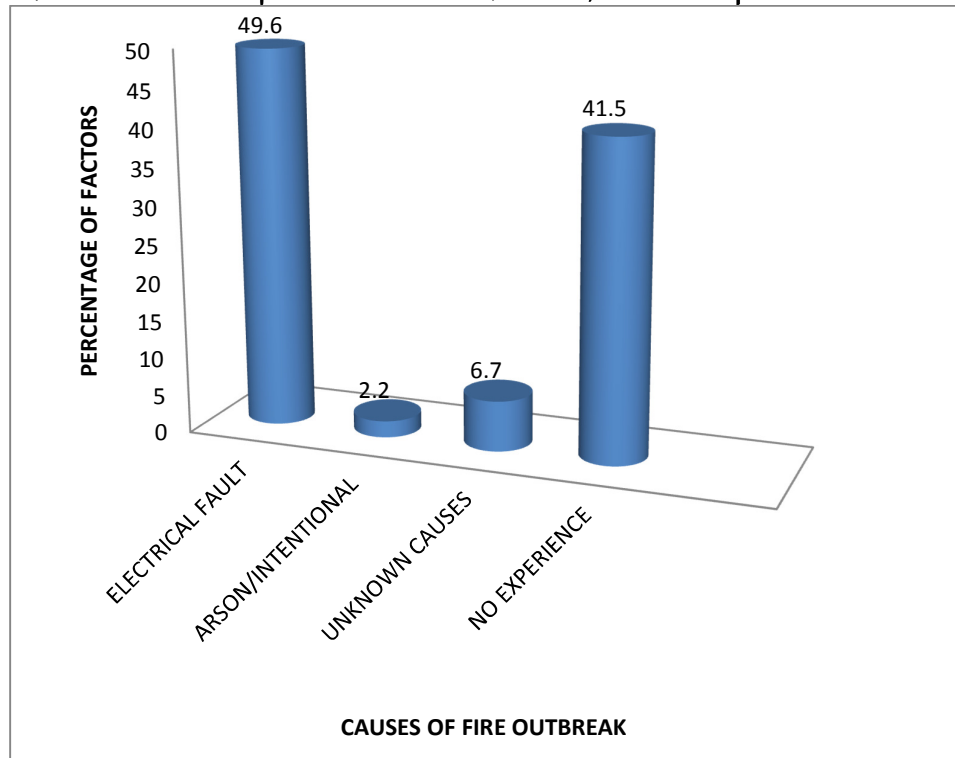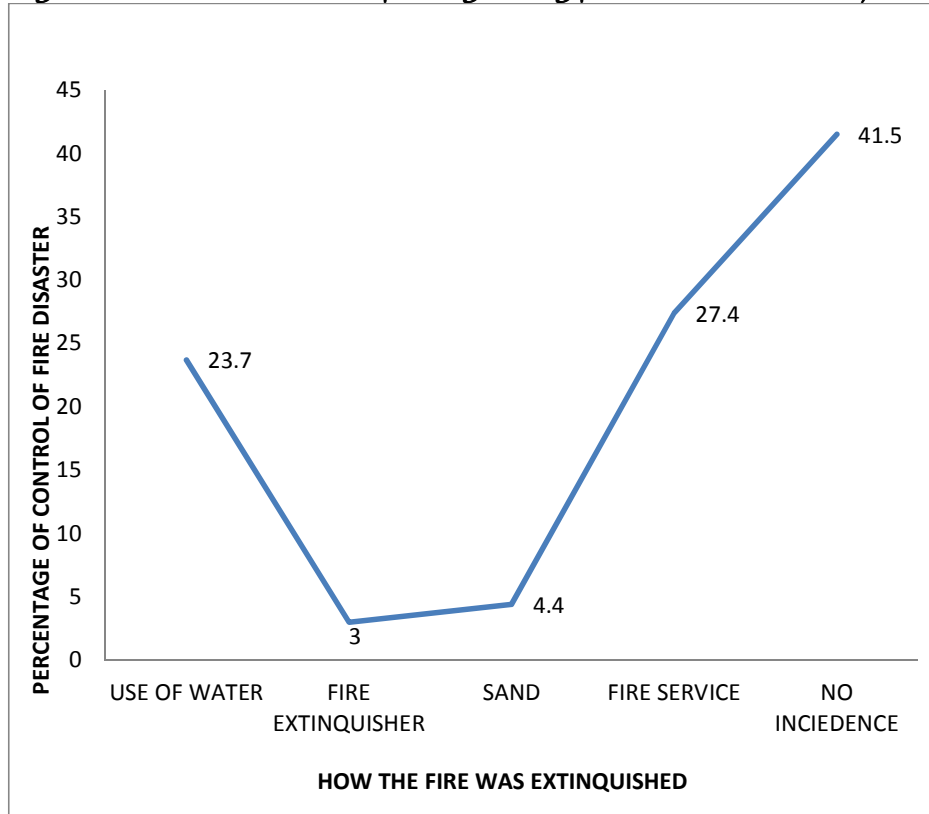

Research Question 2

What are the common methods of extinguishing fire outbreaks in the study area? The result shown in figure 2 revealed that, during the course of fire disaster in the study area, 23.7% of the respondents used water in extinguishing the fire, 3.0% used fire extinguisher, 4.4% used sand, while 27.4% employed the university fire service unit to control the outbreak. 41.5% respondents do not experienced fire outbreak in the study area. This result is an indication that majority of the students who have not experienced fire outbreak are not prepared to fight fire hence fire fighting equipment need experience to use vis-a-vis the mind set to curb fire outbreak. This finding is in line with ISDR (2006) which posit that fire disaster risk management is a habit and a skill which begins with student's level of knowledge in a formal school setting. The result of the study also showed that Ahmadu Bello University fire service is prepared to fight fire hence 27.4% fire out breaks are controlled by the university fire service unit. The University has also published a safety manual for student's resident on campus aimed at creating awareness on student's safety in the most populous university south of the Sahara (ABU, 2010). It is a real indication of a committed university leadership.

Figure 2: Common methods of extinguishing fire outbreaks at ABU, Zaria Hostels

Research Question 3

What are the roles of social media in creating awareness about fire disasters in the study area? Result presented in figure 3 indicated that, 10.4% of the respondents got notification about recent fire outbreaks via social media, 16.3% via rumours, 2.2% were eye witness and 71.1% had no incidence. This result is an indication that social media plays a significant role in information dissemination among the students of ABU, Zaria. Ahmed (2011) observed that social media is indeed an indispensable tool in information dissemination regarding disaster management. Aminu, Usman and Alkali (2014) in their submission recommended that Nigerian University ICT units should use social media platforms like the Facebook, Twitter, Watsapp group in disseminating information and creating awareness on fire safety and its prevention hence most students utilize this media as a source of information. International Federation of Red Cross and Red Crescent Societies, (2013) opine that, creating aware ness on safety precautions is a sine qua non to a disaster free society and should be embraced by all well-meaning citizens globally.

Figure 3: The roles of social media in creating awareness about fire disasters at ABU, Zaria
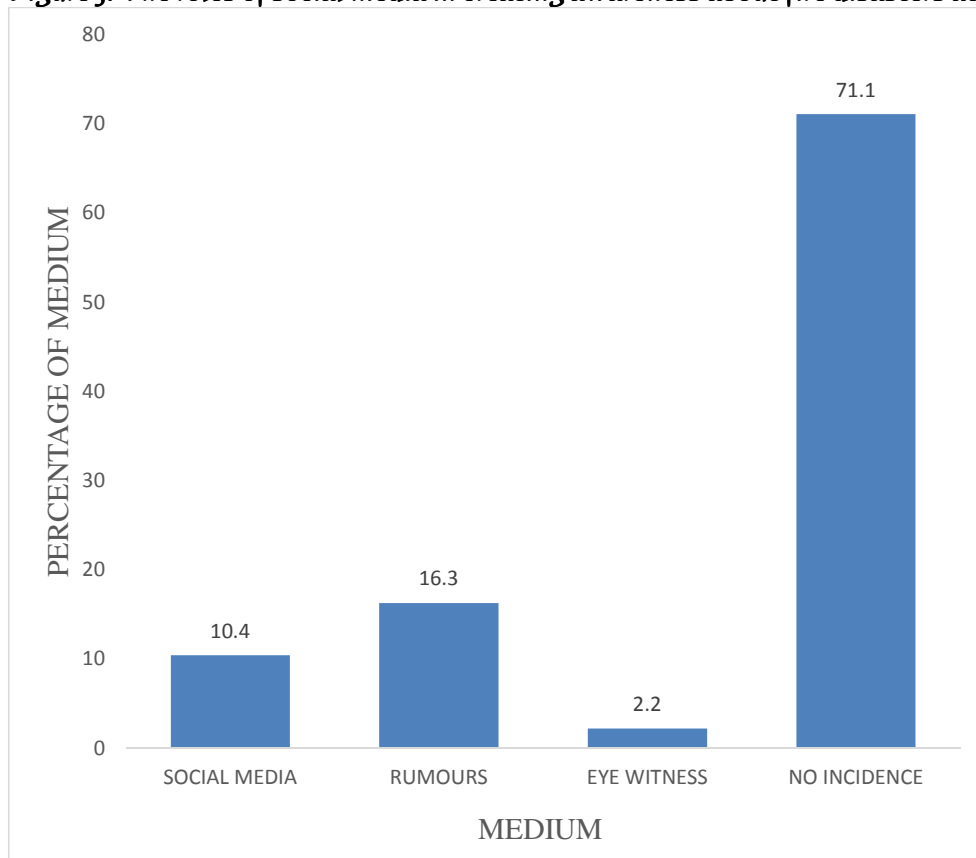
CONCLUSION AND RECOMMENDATION

The study examined students' preparedness for fire emergency and the role of social media. The study shows that most of the respondents have never been aware or oriented about fire safety and its prevention. It also confirmed that the fire service of Ahmadu Bello University, Zaria has been working round the clock with the available fire fighting equipment to combat fire disasters. The fire service unit of the University have been creating awareness on best safety practices using safety manual for student's resident on campus as a medium of communication. However, informal means of communication such as rumours still exist as a medium of communication among students of the university resident in the university hostels. Social media is minimally utilized as a medium of disseminating information and creating awareness on fire safety. Based on the findings of the study the following recommendations were made: The University management should ensure that all the hostel residents adhere to rules and regulations governing the halls as well as inculcate safety measures, orientations, seminars at the hostels, various departments and even at the faculty level. The University management should also have effective and efficient fire fighting equipment in the various hostels. Fire extinguishers should be properly placed in strategic places for easy access. The use of electrical appliances like electric cookers and heaters should be banned and the fitness of electric sockets should

be adequately checked. Finally, The University ICT unit should use social media platforms like the Facebook, Twitter, Watsapp group in disseminating information and creating awareness on fire safety and its prevention.

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