FACTORS INFLUENCING DISASTER MANAGEMENT AMONG SECONDARY SCHOOL TEACHERS IN LAGOS STATE

Ogunsemore, M.A. Fasoranti, A.J. Ibenero, B. C. & Olawuyi, O.
Dept of Human Kinetics and Health Education, University of Lagos
National Institute for Sports, Surulere, Lagos

Abstract
Teachers' knowledge and consciousness of safety and disaster management is crucial in averting inherent dangers in schools. This study investigated factors influencing disaster management among secondary school teachers in Lagos state, Nigeria. Three hypotheses were tested. The descriptive research method was used in carrying out the study. Two hundred respondents were selected randomly from three local government area of Lagos state. A validated Disaster Management Questionnaire (DMQ) with reliability coefficient of 0.73 was used as instrument for data collection. The data collection was carried out by the researchers and five trained research assistants. Percentages, frequency counts, pie-chart and bar-chart were used to analyze the demographic characteristics of the respondents while inferential statistics of chi-square (X^2) was used to test the hypothesis at 0.05, level of significance. The findings of the study revealed that equipment, periodic training, and funding influenced disaster management among secondary schools teachers in Lagos state, Nigeria. The study therefore recommended that government should constantly train teachers in disaster management so that they can have necessary knowledge and skills needed to manage disaster.

Key words*: Disaster preparedness, Mitigation, Response, Recovery, School safety.*

Introduction
Disasters are incidents that lead to the destruction of, or bring damages to, human, property, environmental, social, and economic resources and that expose the insufficiency of local resources thereby bringing the society closer together. Every society in the world has been exposed to various types of disasters of different scales for different reasons (Tzeng, Feng & Cheng, 2016; Fung, Loke & Lai, 2008). Students are deemed to be among the vulnerable groups in the context of disasters. Children are more vulnerable to disasters than adults, as they are more fragile both physically and mentally. Hence, disasters potentially leave both physical and psychological marks on children.In the event of a school disaster, children are the most affected, schooling systems disrupted thus affecting a fundamental right of children, the right to education.

The United Nations Development Programme (UNDP, 2004) defined disasters as a serious disruption of the functioning of a community or a society causing widespread human, material, economic and environmental loses which exceed the ability of the affected community/society to cope using its own resources. A disaster is therefore an event or series of events, which give rise to

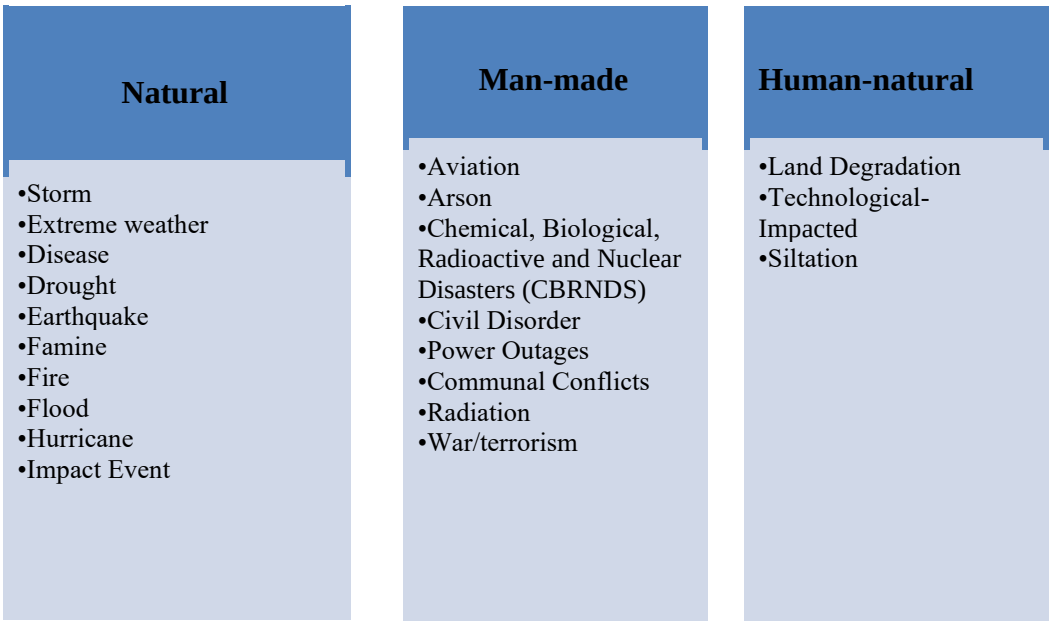
casualties and/or damage or loss of property, infrastructure, essential services or means of livelihoods on a scale which is beyond the normal capacity of the affected community to cope with unaided. This event disrupt the normal patterns of life (or ecosystem) and extraordinary emergency interventions are required to save and preserve human lives and/or the environment. Disasters can either be manmade or natural, and either of slow or rapid onset (Kikuvi, 2011)

Disaster may be of different forms such as drought, rainstorms, windstorms, floods, ethno-religious crises or terrorist's attacks as shown in figure 1. Adekola (2022) reported that more than one hundred thousand students have been displayed, killed, kidnapped and forced out of schools in the last five years due to unending state of disaster in Nigeria. This invariably constitutes potential threats to national development, quality education, poverty alleviation programme and the attainment of the overall societal goals.

International Finance Corporation (2010) asserted that the school safety and educational continuity require a dynamic, continuous process initiated by management and involving workers, students, parents, and the local community. They further reiterated that school disaster management involves the familiar cycle of steps found in all project management: assess hazards, vulnerabilities, capacities and resources; plan and implement for physical risk reduction, maintenance of safe facilities, standard operating procedures and training for disaster response; test mitigation and preparedness plans and skills regularly, with realistic simulation drills; and revise your plan based on your experience. School disaster management mirrors individual and family disaster prevention, and wider community disaster prevention efforts.

School management is responsible for planning for disaster risk reduction by continuously assessing local risks (Ganpatrao, 2014). School management must have procedures in place in relation to disasters and emergencies. Teachers should have sufficient knowledge about disaster management issues such as things to do during an earthquake, building evacuation, firefighting, search, and rescue. Many secondary schools in Nigeria do not have health care personnel. Hence, teachers' competence in first aid becomes crucial.

Figure 1: Classification of disaster



Source: Wand, Ayuba and Asika (2015)

According to the Comprehensive School Safety framework which has been widely endorsed, adopted and adapted to guide partnership work, many stakeholders are recognized at all levels of government and society that are needed to make schools safe and ensure educational continuity (World Bank, 2011). At the heart of the framework is child-centered multi hazard risk assessment and it is wrapped around by education sector policies and plans aligned to disaster risk management policies and plans. The holistic approach to school disaster management sees this embedded in education management at all levels. It is not response oriented, instead it incorporates systematic, pro-active, risk reduction measures to reduce the need for external assistance.

Mohammed (2020) asserted that teachers play a prominent role in disaster management and as such they should be trained in all disaster management techniques. Some of the techniques highlighted by him include, fire safety drills, basic lifesaving skills, deployment of safety equipment, flood management and accident prevention. Some of the factors that can affect effective management of disaster including funding, training of teachers and support workers, provision of safety facilities and equipment. Every school requires money and other resources for their daily operations. Usually these are provided by the government through various administrative layers and in the absence of this, disaster management will be a difficult task to achieve within the school settings. Therefore, this study

examined factors influencing disaster management among secondary school teachers in Lagos state, Nigeria

Hypotheses

The following hypotheses were tested:

1. Availability of safety equipment will not have significant influence on disaster management among secondary school teachers
2. Disaster training will not have significant influence on disaster management among secondary school teachers
3. Funding will not have significant influence on disaster management among secondary school teachers

Methodology

This study adopted the descriptive method. The population of the study comprised all secondary school teachers in Lagos state, Nigeria. Multi-stage sampling procedure was used to select the sample for this study. Simple random sampling technique was used to select three educational districts out of the six educational districts in Lagos state. Educational District I, II and IV were selected respectively. Stratified random sampling technique was used to select six schools from each of the districts with Eighteen in total. Purposive sampling technique was used to select Ten (10) teachers from each of the schools totaling one hundred and eighty (180) respondents. The instrument for data collection was Disaster Management Questionnaire (DMQ) which was validated by experts in community health and measurement and evaluation. The reliability coefficient of the instrument was 0.73 which is adjudged reliable. The instrument contained section A which elicited demographic information while section B had 12-item questions designed based on 4-point Likert scale on safety equipment, safety training and funding. The Researchers and five trained research assistants assisted in data collection. Data collected were screened and coded. Statistical Package for Social Sciences (SPSS) was deployed to analyze the collected data. Percentages, frequency counts, pie-chart and bar-chart were used to analyze the demographic characteristics of the respondents while inferential statistics of chi-square (X^2) was used to test the hypothesis at 0.05, level of significance.

Results

Figure 2: Distribution of respondents based on gender

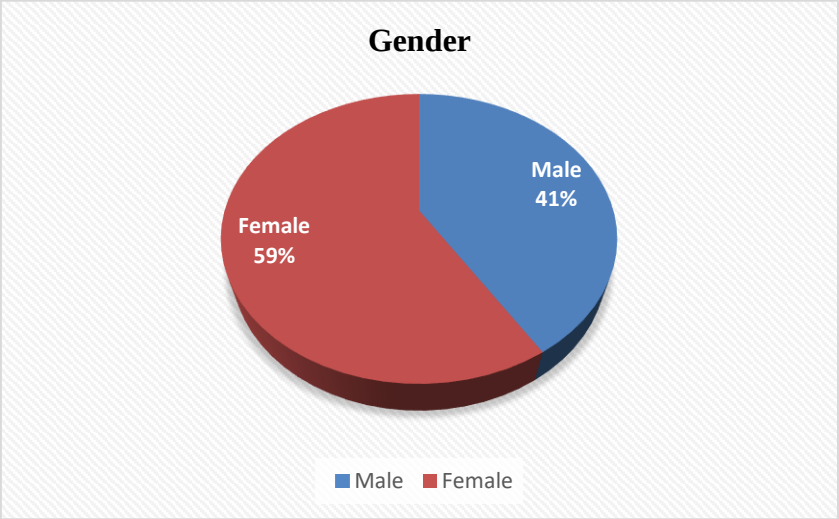


Figure 2 reveals that 106 (59%) of the respondents were female while 74 (41%) were male.

Table 1: Distribution of respondents by years of experience

Years of Experience	Frequency	Percentages
Less than 3 years	33	18.33
3 – 8 years	79	43.89
8 years and above	68	37.78
Total	**180**	**100**

Table 2: Distribution of respondents response on most common disaster

Disaster	Frequency	Percentages
Flood	34	18.89
Building collapse	22	12.22
Road accidents	48	26.67
Sports accidents	57	31.67
Others	19	10.55
Total	**180**	**100**

Figure 3: Knowledge of disaster management

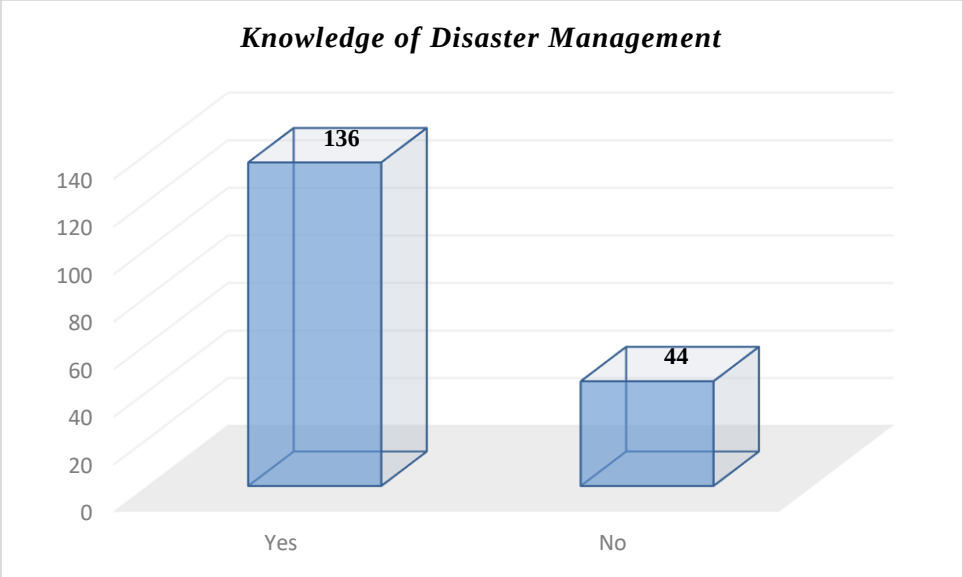


Figure 3 indicates that 136 of the respondents have knowledge about disaster management while 44 of the respondents have no knowledge of disaster management

Hypotheses Testing

Hypothesis one: Availability of safety equipment will not have any significant influence on disaster management among secondary school teachers. The inferential statistics of Chi-square was used to testing this hypothesis at 0.05 level of significance. The result is presented in Table 3.

Table 3: Chi-square (X^2) analysis on availability of safety equipment and disaster management

Variable	N	Df	L.S.	X^2_{cal}	$X^2_{critical}$	Remarks
Safety Equipment	180	9	0.05	123.15	18.12	Significant

From table 3, the calculated value of 123.15 was higher than the critical value of 18.12 at degree of freedom 9 and 0.05 level of significance. This means that the null hypothesis which stated that availability of safety equipment will not have any significant influence on disaster management is hereby rejected. The imply that availability of safety equipment will significantly influence disaster management among secondary school teachers in Lagos state.

Hypothesis two: Disaster training will not have any significant influence on disaster management among secondary school teachers. The inferential statistics of Chi-square was used to testing this hypothesis at 0.05 level of significance. The result is presented in Table 4.

Table 4: Chi-square (X^2) analysis on disaster training and disaster management

Variable	N	Df	L.S.	X^2_{cal}	$X^2_{critical}$	Remarks
Disaster Training	180	9	0.05	67.14	18.12	Significant

From table 4, the calculated value of 67.14 was higher than the critical value of 18.12 at degree of freedom 9 and 0.05 level of significance. This means that the null hypothesis which stated that disaster training will not have any significant influence on disaster management is hereby rejected. The shows that disaster training will have significant influence on disaster management among secondary school teachers in Lagos state.

Hypothesis three: Funding will not have any significant influence on disaster management among secondary school teachers. The inferential statistics of Chi-square was used to testing this hypothesis at 0.05 level of significance. The result is presented in Table 5.

Table 5: Chi-square (X^2) analysis on funding and disaster management

Variable	N	Df	L.S.	X^2_{cal}	$X^2_{critical}$	Remarks
Funding	180	9	0.05	160.23	18.12	Significant

From table 5, the calculated value of 160.23 was higher than the critical value of 18.12 at degree of freedom 9 and 0.05 level of significance. This means that the null hypothesis which stated that funding will not have any significant influence on disaster management is hereby rejected. Therefore, funding had significant influence on disaster management among secondary school teachers in Lagos state.

Discussion

The finding revealed that availability of safety equipment had significant influence on disaster management. This is inline with Tzeng et al (2016) who reported that to best prepare for disasters before they take place, emergency response workers need to have the proper personal protective equipment (PPE)

on hand to help keep them safe. Availability of safety equipment within the school premises is paramount to disaster management. Depending upon the type of disaster, emergency workers and others usually need a range of personal protective equipment, including hand protection and apparel, to keep them safe from any number of threats (Larry, 2006).

The finding of the also shows that disaster training and funding had significant influence on disaster management among secondary school teachers. This result alligned with Akinsanmi and Ilelabola (2021) that asserted that school physical safety is not continuously assured, by design and construction alone. Once a school building is in use, it falls to staff, students and communities to accept responsibility for ongoing and maintenance and to regularly monitor safety conditions. A chain of command, designated responsibilities, adequate budget, and training are all important in facilitating disaster management. Health Safety and Environment (2022) emphasized that disaster management training plays an integral role in keeping communities safe. It involves coordinating the resources, such as pollution control systems, and responsibilities, such as following best practice policies, needed to prevent, prepare for, respond to, and recover from emergencies.Disasters can be basically in schools when teachers are trained on disaster management techniques and the motivation to create a culture of prevention and resilience to disaster. In this regard, collecting and disseminating knowledge and information on hazards, vulnerabilities, and capacities, especially for teachers should be prioritized. Financing disaster mitigation is deemed sufficient to enable a substantial reduction in the number of human lives lost, people affected and the total economic losses from a disaster (Van-Niekerk, 2015).

Conclusion

The study highlighted that safety equipment, funding and disaster management training play significant role in influencing disaster management among teachers in secondary schools. School Safety is defined as the creation of safe environments for children starting from their homes to their schools and back. This includes safety from large-scale 'natural' hazards of geological/climatic origin, human-made risks, pandemics, violence as well as more frequent and smaller-scale fires, transportation and other related emergencies, and environmental threats that can adversely affect the lives of children. Therefore, adequate measures such as provision of safety equipment, constant training of teachers on disaster management and adequate provision of funds must be put in place to averts all hazards.Based on the conclusion above, the researcher recommended the following:

1. Government should ensure that adequate safety equipment and facilities is made available and accessible for teachers in Lagos state.

This will in turn help in preventing and reducing the impact of disaster on both staff and students

2. School administrators in Lagos state should endeavor to train teachers periodically on disaster management techniques. Disaster management training will give the teachers the necessary safety skills to put to use in case of any emergencies
3. School stakeholders should invest on safety and disaster management. This will help to promote health and wellbeing of student and staff.

References

Adekola, I. (2022). Rising case of insecurity in Nigeria: Holistic review. *Journal of Sociology and Advanced Peace Conflict, 2, 12-22*

Akinsanmi, O. & Ilelabola, A. (2021), School safety consciousness and awareness among primary school teachers in Ondo.*International Journal of Security, 1, 34-41*

Fung, O.W., Loke, A.Y., & Lai, C.K. (2008). Disaster preparedness among Hong Kong nurses. *Journal of Advance Nursing, 62(6):698-703.*

Ganpatrao, J.S. (2014). Knowledge and practices of school teachers regarding disaster management.*International Journal of Health System and Disaster Management, 2 (2):98.*

International Finance Corporation (2010). Disaster and emergency preparedness: Guidance for schools. Retrieved from https://www.preventionweb.net/files/13989 ifcdisastere mergencyhandbook63010.pdf on 10th November, 2022

Larry, J. (2006). The right PPE for disaster responders. Retrieved from https://ohsonline.com/Articles/2006/01/The-Right-PPE-for-Disaster Responders.aspx on 10th November, 2022

Lynch, J., Wathen, J., Tham, E., et al. (2010). Disasters and their effects on children.*Advance Pediatrics,* 57(1):7-31.

Mohammed, S. (2020). Teachers' role in disaster preparedness and mitigation. *Journal of Social Sciences, 4, 17-26*

Tzeng W,C., Feng, H.P., Cheng, W.T., et al. (2016). Readiness of hospital nurses for disaster responses in Taiwan: a cross-sectional study. *Nurse Education Today, 47:37-42.*

UNDP (2004).Reducing disaster risks: A challenge for development. UNDP, New York.

Van Niekerk, D. (2015). Disaster risk governance in Africa: A retrospective assessment of progress against the Hyogo Framework for Action (2000- 2012). Disaster Prevention and Management, 24(3), 397–416.

Wand, M.Z., Ayuba, G.U., & Asika, B.G. (2015).Needs for disaster risks reduction education in Nigeria. *IOSR Journal of Environmental Science, Toxicology and Food Technology, 9, 1, 43-47*

World Bank (2011). Urban risk assessment: An approach to understanding disaster risk and climate change in cities. The World Bank