



Perceived Influence of Flood Disaster on the Management of Secondary Schools in Makurdi Education Zone of Benue State, Nigeria

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ABSTRACT

The study investigated the influence of flood disaster on the management of secondary schools in Makurdi Education Zone of Benue State. Two research questions and two research hypotheses guided the study. Descriptive survey design was adopted for the study. The population comprised 1089 teachers from 149 secondary schools. A total of 220 teachers from 20 secondary schools was selected using simple random sampling technique. Flood Disaster and School Management Questionnaire (FDSMQ) was used for data collection. The data collected were analysed using mean and standard deviation to answer the research questions and chi-square to test the hypotheses at 0.05 level of significance. The findings revealed that flood disaster significantly influences school facilities and school attendance in secondary schools in Makurdi Education Zone of Benue State. Based on the findings, it was recommended among others that unconventional schools should be organized in IDP (Internally Displaced persons) camps to give displaced students the opportunity of schooling again.

Keywords: Flood Disaster, School Management, School Facilities & School Attendance.

INTRODUCTION

For a long time, flood has been one of the most common forms of natural disasters. Its frequency has been increasing over the years, resulting in loss of lives, damage to school properties and destruction of the environment. Flood is generally seen as the overflowing of water from river or other bodies of water due to excessive rainfall or other inputs of water which temporarily submerge homes, farmlands and other economic and social facilities such as the school. According to Ijigah and Akinyemi (2015), flood usually occurs when the excess waters of the river spills beyond its capacity and boundaries. The authors perceived flood from the perspective of surplus water from the rivers overflowing the banks and running into adjoining low-lying lands. However, Pinga (2018)'s definition of flood is more comprehensive and holistic. Pinga defined flood as an overflow of water that submerges land which is usually dry or previously uncovered by water; which is normally as a result of an overflow from water bodies such as the rivers, lakes, and oceans or due to accumulation of rainwater on saturated ground.

Adebayo and Rabee (2011) and Yahaya, Ahmad and Abdalla (2010) highlighted the three forms of flooding to include coastal flooding, river flooding and urban flooding. According to the authors, coastal flooding occurs in the low-lying belt of mangrove and fresh water swamps along the coast. River flooding occurs in the flood plains of the larger rivers, while short-lived flash floods are associated with rivers in the inland areas and sudden heavy rains that change into destructive torrent within a short period. Urban flooding on the other hand occurs in towns on flat or low-lying terrain especially where little or no

provision has been made for surface drainage or existing drainages have been blocked with houses or waste.

Flood seems to occur when there is an inundation of an area which is not normally a river, lake or sea, and when excess precipitation exceeds natural infiltration, evaporation and possible transmission. According to Ayoade (2008), floods in tropics are partly or wholly climatological in nature. That is, they result from torrential rainfall. Human interference in the hydrological relationship within the watershed can also cause flooding. Bryant (2001) adds that human beings often cause flood disaster when they make environmentally unsound decisions such as building in an area that is prone to flooding (urbanization) and deforestation.

In Nigeria, the incidence of flood is becoming a reoccurring decimal in most rural and urban areas leading to colossal loss of properties and lives. For example, cases of flood were recorded in Makurdi, Guma and Gwer-West in 2000 and 2011. Also in 2012, 2014 and 2017 Makurdi Education Zone of Benue State and other parts of Nigeria witnessed an unprecedented tragedy as communities were swallowed by raging floods. This brought untold hardship, anguish and sorrow to great population of the Benue inhabitants. As the surging floods spread into tributaries of the River Niger into many communities, many helpless poor people were killed amid wide spread damaged houses, school buildings and other properties worth billions of naira.

Floods often cause damage to homes, schools and business if they are in the natural flood plains of rivers. While riverine flood damage can be eliminated by moving away from rivers and other bodies of water, people have traditionally lived and worked by rivers because the land is usually flat and fertile and because rivers provide easy travel and access to commerce and industry (Pinga, 2018). However, when floods occur, especially in Makurdi Education Zone of Benue State, schools are submerged and many documents and properties damaged as well as bringing school attendance to a shutdown thereby influence the entire school management process.

Management of secondary schools which requires proper planning, directing, monitoring and controlling of human, material, time and physical resources, finances, records and information flow has been affected drastically within this latter part of the 21st century as most school facilities and documents have been submerged thereby keeping students and teachers out of the school (Ramalho, 2006). According to the United Nations International Strategy Disaster Reduction (UNISDR) (2006-2007), when flood disaster strikes, infrastructural facilities in the schools are greatly destroyed or damaged. This is because flood disaster does not only affect the classrooms where students learn, but also cover the school premises, playground and other documents that facilitates teaching and learning in the school. This makes it hard for learners to continue with their learning activities.

According to Amanchukwu, Amadi-Ali and Ololube (2015), floods often force school children to relocate with their families to places that are safe from flooding. This influences their education as these new places may not have education facilities. In Makurdi Education Zone of Benue State, schools in Makurdi, Guma and Gwer-west among other Local Government Areas were greatly affected by the 2014 and 2017 flood disasters. The victims were moved to stations called Internal Displace Persons Camp. Thousands of school children who moved with their families to such places of safety had their schooling disturbed as they no longer had access to education (Benue State SEMA Report, 2015). The absenteeism has a negative impact on the academic performance of such children.

The effect of flood is so devastating that most secondary schools in Makurdi Education Zone of Benue State were closed down for almost one full term. Even when this deluge was abated, most schools could not resume because the damage done by the flooding affected the schools so negatively that the environment (school facilities, play grounds) were not conducive for teaching and learning process to take place. Some of the school, though, not directly affected by the flood, but affected families took shelter in them; thereby, pushing students and teachers away for some time. Thus, academic activities in these schools were shut down. This deplorable situation may not have only affected the facilities of the schools but also school attendance and students' performance. It is this situation that informed the need for the researchers to investigate the influence of flood disaster on the management of secondary schools in Makurdi Education Zone of Benue State.

Statement of the Problem

Flood disaster in Makurdi Education Zone of Benue State has reached an unprecedented level in recent times. Most often, school facilities such as buildings and play fields as well as school activities such as attendance and learning may have all been influenced by flood disaster. The worst part is that many students in this part of the country may have failed to attend school during heavy flood. These floods may also force students to relocate with their families to places that are safe from flooding. This may influence the management of secondary schools in terms of school facilities and attendance as thousands of these students who may have moved with their families to places of safety may have had their schooling programme disturbed or distorted. When they return, they may have lost the memory of what was taught as they may not have had access to education at all. The problem of the study was to find out the influence of flood disaster on the management of secondary schools in Makurdi Education Zone of Benue State?

Purpose of the Study

The purpose of this study was to investigate the perceived influence of flood disaster on the management of secondary schools in Makurdi Education Zone of Benue State. Specifically, the study sought to:

1. find out the influence of flood disaster on school facilities in secondary schools in Makurdi Education Zone of Benue State.
2. examine the influence of flood disaster on school attendance in secondary schools.

Research Questions

The study was guided by the following research questions:

1. How does flood disaster influence school facilities in secondary schools in Makurdi Education Zone of Benue State?
2. What is the influence of flood disaster on school attendance in secondary schools?

Hypotheses

The following null hypotheses were formulated and tested at 0.05 level of significance:

- H₀₁. Flood disaster has no significant influence on school facilities in secondary schools in Makurdi Education Zone of Benue State.
- H₀₂. Flood disaster has no significant influence on school attendance in secondary schools.

RESEARCH METHOD

The study adopted the descriptive survey design. The population comprised of 1,089 teachers from 149 secondary schools in Makurdi Education Zone of Benue State, Nigeria. A sample of 220 teachers representing 20% in 20 schools representing 13% of the population was selected using simple random sampling technique. This was because the population is homogeneous.

A self-structured questionnaire titled “Flood Disaster and School Management Questionnaire (FDSMQ)” was used for data collection. The questionnaire was divided into sections A and B. Section A contained information on the personal data of the respondents, while section B was divided into two clusters, A and B. Cluster A contains items 1-5, that bordered on the influence of flood disaster on the school facilities, while cluster B contains items 6-10 on the influence of flood disaster on school attendance. Responses were based on the modified four-point Likert type scale in which the respondents were requested to answer: Strongly Agreed (SA), Agreed (A), Disagreed (D) and Strongly Disagreed (SD). Item with less than 2.50 was rejected as not having the desired influence, but accepted if it was 2.50 and above. The questionnaire was validated by two experts in Educational Management and Test and Measurement from the Faculty of Education, Benue State University, Makurdi.

The questionnaire was trial-tested using 30 teachers who were not part of the sampled population. The reliability of the instrument was measured using Cronbach Alpha. It yielded a reliability coefficient of 0.88 which indicated high internal consistency. The data collected were analysed using mean and standard deviation to answer the research questions and chi-square to test the null hypotheses at P<0.05 level of significance.

RESULTS AND FINDINGS

Research Question One: *How does flood disaster influence school facilities in secondary schools in Makurdi Education Zone of Benue State?*

Table 1: Mean ratings and standard deviations on influence of flood disaster on school facilities in secondary schools

Item No	Item Description	SA	A	D	SD	\bar{X}	SD	Decision
1.	Flood disaster sweeps away classrooms and this may influence effective teaching and learning.	93	87	21	15	3.19	0.88	Agreed
2.	Flood disaster submerges school library, and this may influence students' reading.	100	73	29	14	3.20	0.91	Agreed
3.	Flood disaster covers school laboratory and this may influence effective teaching and learning.	99	68	28	21	3.13	0.98	Agreed
4.	Flood disaster submerges school documents and this may destroy school records.	102	79	18	17	3.23	0.19	Agreed
5.	Flood disaster covers playground and this may influence students' activities	97	92	15	12	3.27	0.82	Agreed
Cluster mean and standard deviation						3.20	0.90	Agreed

Table 1 shows that the mean ratings of items 1-5 are 3.19, 3.20, 3.13, 3.23, and 3.27 respectively with the corresponding standard deviations of 0.88, 0.91, 0.98, 0.91 and 0.82. All the mean ratings are above the cut-off point of 2.50. This means that the respondents agreed that flood disaster sweeps away classrooms and this may influence effective teaching and learning. It also means that flood disaster submerges school library and this influences students' reading. They also agreed that flood disaster covers school laboratory and this influences effective teaching and learning and that flood disaster submerges documents and destroy school records. Moreover, flood disaster covers playground and this influences students' activities. The cluster mean of 3.20 with the standard deviations of 0.90 was also found to be above the cut-off point of 2.50. This implies that flood disaster influence school facilities in secondary schools in Makurdi Education Zone of Benue State

Research Question Two: *What is the influence of flood disaster on school attendance in secondary schools?*

Table 2: Mean ratings and standard deviations on the influence of flood disaster on school attendance in secondary schools

Item NO	Item Description	SA	A	D	SD	\bar{X}	SD	Decision
6	Flood disaster forces students and teachers away from their homes and schools and this may influence their attendance in school.	105	91	12	8	3.36	0.75	Agreed
7	Flood disaster covers roads which hinders students' and teachers' access to school.	96	82	20	18	3.19	0.92	Agreed
8	During flood, families are camped in school premises which influence school attendance.	109	97	7	3	3.44	0.63	Agreed
9	Flood leads to collapse of school buildings which influences school attendance negatively.	95	79	23	19	3.16	0.94	Agreed
10	Flood disaster brings home sickness to students' and teachers' which influences their attendance.	101	89	17	9	3.31	0.79	Agreed
Cluster mean and standard deviation						3.29	0.81	Agreed

Table 2 reveals that the mean ratings of items 6-10 are 3.36, 3.19, 3.44, 3.16, and 3.31 respectively with the corresponding standard deviations of 0.75, 0.92, 0.63, 0.94 and 0.79. All the mean ratings are above

the cut-off point of 2.50. This means that the respondents agreed that flood disaster force students and teachers away from their homes and schools and this influences their attendance in school. They also agreed that flood disaster covers roads which influence students' and teachers' access to school. They further agreed that during flood, families are camped in school premises which influence school attendance negatively and that flood leads to collapse of school buildings which influences school attendance adversely. Moreover, their responses show that flood disaster brings home sickness to students and teachers which influence their attendance. The cluster mean of 3.29 with the standard deviations of 0.81 was also found to be above the cut-off point of 2.50. This implies that flood disaster influence school attendance in secondary schools.

Research Hypothesis One: Flood disaster has no significant influence on school facilities in secondary schools in Makurdi Education Zone of Benue State.

Table 3: Chi-square test of the influence of flood disaster on school facilities in secondary schools

Responses	Observed Frequency	Expected Frequency	df	Level of sig	χ^2_{cal}	χ^2_{tab}	P-value	Decision
SA	101	54						
A	76	54	3	0.05	99.33	7.82	0.00	Significant
D	11	54						
SD	25	54						

Table 3 shows that $\chi^2_{cal.} = 99.331^a > 7.815$; $P < .05$ with 3 degree of freedom. This shows that the null hypothesis which stated that flood disaster has no significant influence on school facilities in secondary schools in Makurdi Education Zone of Benue State was rejected. This means that flood disaster has significant influence on school facilities in secondary schools in Makurdi Education Zone of Benue State.

Research Hypothesis Two: Flood disaster has no significant influence on school attendance in secondary schools.

Table 4: Chi-square test of the influence flood disaster on school attendance in secondary schools

Responses	Observed frequency	Expected Frequency	df	Level of sig	χ^2_{cal}	χ^2_{tab}	P-value	Decision
SA	114	54						
A	76	54	3	0.05	126.44	7.82	0.00	Significant
D	29	54						
SD	7	54						

Table 4 shows that $\chi^2_{cal.} = 126.440^a > 7.815$; $P < .05$ with 3 degree of freedom. This shows that the null hypothesis which stated that flood disaster has no significant influence on school attendance in secondary schools was rejected. The implication is that flood disaster has significant influence on school attendance in secondary schools.

DISCUSSION OF FINDINGS

The finding of this study revealed that flood disaster had significant influence on school facilities in secondary schools. This is in agreement with that of United Nations International Strategy Disaster Reduction (UNISDR) (2006-2007) that discovered that when flood disaster strikes, infrastructural facilities in the schools are greatly destroyed or damaged. This makes it hard for learners to continue with their learning activities for a long time. This is because the buildings, playgrounds, farmland and all

records as well as instructional materials may be covered and destroyed by the flooding water. The researchers discovered during the fieldwork that when flood occurred, important school facilities such as classrooms and playgrounds as well as documents were damaged thereby disrupting the daily routine of learning.

The results further showed that flood disaster had significant influence on school attendance in secondary schools. This finding is in line with that of Amanchukwu, Amadi-Ali and Ololube (2015) who discovered that floods often forces school children to relocate with their families to places that are safe from flooding. This influences their education as these new places may not have education facilities. The researchers discovered during the fieldwork that in Makurdi Education Zone of Benue where the 2012, 2014 and 2017 flood disasters occurred, families were moved to stations called Internally Displaced People's Camps (IDPC). Thousands of school children who moved with their families to such places for safety, had their schooling disturbed or no longer had access to education at all. The situation was so disastrous that these children would have to compete with their counterparts who never had their educational programme distorted.

CONCLUSION AND RECOMMENDATIONS

Based on the result of this study, it was established that flood disaster which is the overflow of water from its bodies significantly influence school facilities. It was also found that flood disaster significantly influences teachers and students attendance to school. These flood disasters do not only disrupt the effective teaching and learning process, but also brings home hunger as farm lands are also washed in the process. Thereby increases the burden of the family as they had to look for other means to sponsor their children education. Based on the findings, it was recommended that:

1. Educational planners should avoid siting of schools in flood prone areas to avoid this deleterious disaster as it has not only affected the physical facilities of the affected schools but also disturbed disrupt students' academic pursuit.
2. Unconventional schools should be organized in IDP camps to give displaced students the opportunity of schooling again.
3. Schools already established in flood prone zones should endeavour to create awareness within and among members of the host communities to enable them take proactive measure whenever it occurs again.

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