

HAZARD PERCEPTION BY TEACHERS OF PUBLIC SECONDARY SCHOOLS IN RIVERS STATE, NIGERIA

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ABSTRACT

The study investigated hazard perception by teachers of public secondary schools in Rivers State, Nigeria in the areas of hazards vulnerable to schools, disaster perception by teachers, and disaster preparedness level in schools as objectives of the study. The population of the study consists of all the school principals and secondary school teachers in Rivers State. Purposive sampling was used to select 235 schools out of 286 public secondary schools in the state representing schools with 10 teachers and above. A total of seven hundred and twenty-five (725) questionnaires were distributed with five hundred and seventy-two (572) returned well filled giving a percentage response of 79.0%. The result of the analysis revealed: flooding and environmental pollution as the most common hazard in the area of study, thus endangering the lives of people within that area. Similarly, the study revealed that Rivers State is subject to high rainfall and localized flooding occurs regularly. A rain-related disaster such as precipitation/ flooding disrupts teaching and learning activities, physical facilities-related disasters have contributed to student's low performance and excessive cold from climate change-related disasters frustrate student's participation in learning objectives as perceived by teachers. Findings also revealed that most schools are not adequately prepared for Emergencies. Thus, the following are recommended: schools should develop a disaster preparedness plan that is more encompassing, stating and taking into cognizance the various possible hazards that it is prone to; The provision of adequate disaster preparedness and evacuation facilities; Ministry of Education should organize frequent workshops and seminars for school community members to teach them on how to manage disasters as well as how to perform simple first aid to injured people; Ministry of Education should inspect and set guidelines on safety issues in all schools, therefore ensuring that all schools have put in place mechanisms and measures required.

Keywords; Teachers, Hazards, Public, Perception, Emergencies

1 Introduction

Preparedness for school emergencies is a necessity. Education plays a crucial role in shaping the future of a country. It gives future citizens the “capacity,” to contribute to sustainable development and promotes human security (Shaw & Sakurai 2015).

A strong and safe educational environment contributes greatly to the physical and mental well-being of children and provides a foundation for them to become active agents within society. If educational continuity is interrupted as a result of natural hazards, children can easily drop out of the educational system and are more likely to be illiterate when they leave school, thereby harming the country’s (and their own) economic prospects and health. Governments have a responsibility to ensure basic education for all including primary and secondary school learners, which some citizens take more seriously than others. It is estimated that children spend 35–40% of their time at school and this means that it is worth examining the safety (or vulnerability) of children in the face of possible disasters during this time. It is evident from historical data about disasters that children are one of the most vulnerable groups in society, and are more prone to become the victims of natural hazard-induced disasters, particularly while attending school (UNISDR 2015).

Over the past two decades, for instance, countries such as Nigeria, the United States of America, the Philippines, Pakistan, and many more across the globe has been severely affected by a series of disasters, often climate-related (Shah, Abid, Khan, & Amir. 2018; Fahad, & Wang. 2018). The 2010 flood was the worst (Fahad et al.2018), affected 78 districts, damaged crops over more than 2 million hectares, and partially or destroying more than 10 thousand educational structures (ADB and WB 2010). The cost of the tragedy was estimated at over USD 10 billion (Shah *et al.* 2017). Of the 10,348 educational institutions affected by the flood disaster, 9368 were primary schools (Khan and Ali 2014). There is a need for countries to meet the requirements of Millennium Development Goal (MDG), Priority 2 related to the teaching of disaster risk reduction in all primary and secondary schools as part of the national curriculum so that children and teachers can protect themselves from natural hazards by knowing exactly what to do when there is an outbreak as reported by ISDR (2010).

Without vulnerability assessment, communities will not know in what ways they are vulnerable and how hazards may affect them. Without emergency preparedness and response mechanisms, an emergency can easily escalate into a disaster. Vulnerability reduction, like development, empowers communities to take control of their destinies, WHO (1999) and it must be integrated at every sector of a country at every level.

The rise in the number of disasters points towards an increase in vulnerabilities. In recent times, the number of disaster situations in schools has increased.

2 Aim and Objectives of Study

The study aims to investigate hazard perception by teachers of public secondary schools in Rivers State, Nigeria.

Objectives are to:

1. Determine the types of hazard the Public Secondary schools are vulnerable to in Rivers state
2. Examine the perception of teachers in public secondary schools to disasters in Rivers state

3 The Study Area

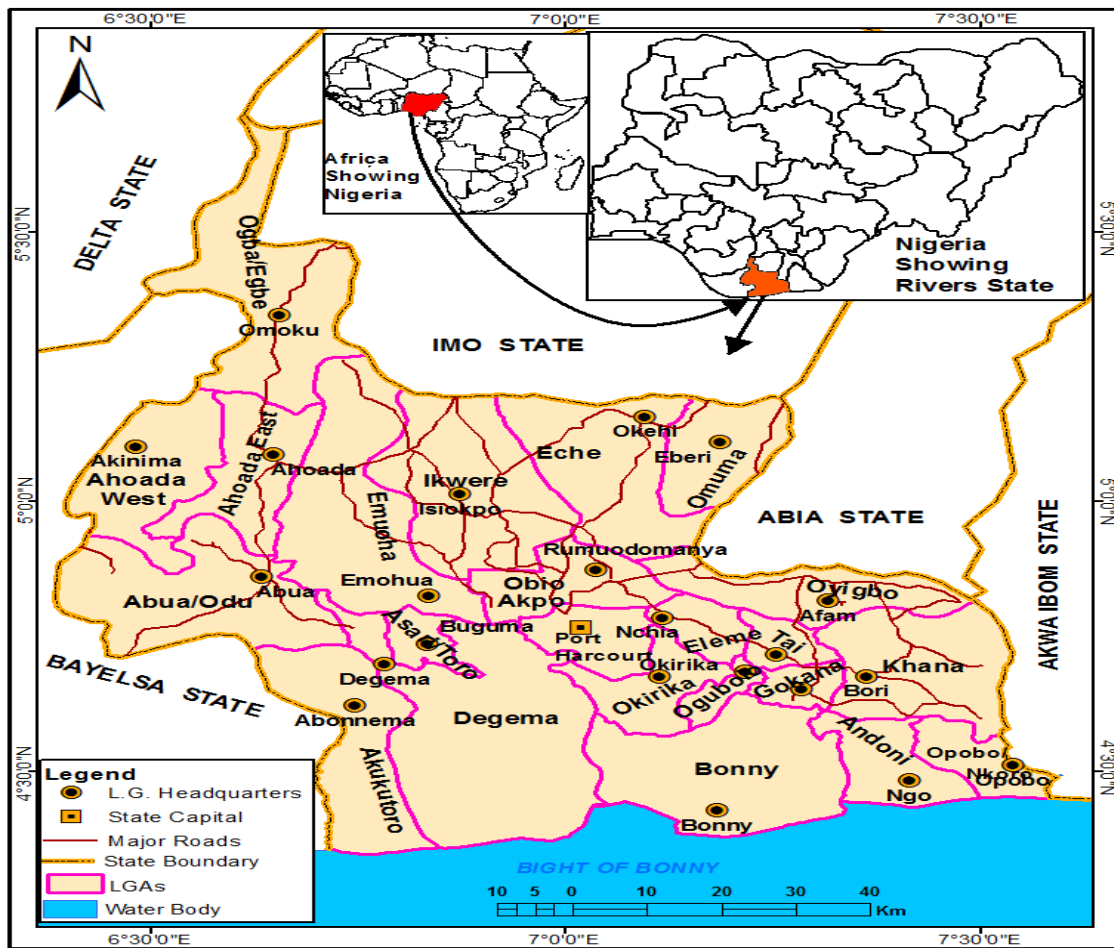


Figure 1: Rivers State Showing the 23 Local Government Areas

Rivers State occupies an area of about 37,000 square kilometers they lie between latitude $4^{\circ} 40' 38''$ North and longitude $6^{\circ} 25' 42''$ East. It is bounded in the south by the Atlantic Ocean, to the north by Imo and the Abia States, to the east by Akwa Ibom State, and the west by Bayelsa and Delta States. Its shores form part of the West African coastline (Uche, 2016). Over one-third of the State is occupied by water with a low land stretching from Bonny in the South to Ndoni in the north. A network of creeks spans the riverine south, emptying into the Atlantic Ocean through numerous tributaries of Rivers state.

4 Materials and Methodology

This study adopted a descriptive survey design comprising all the 268-government senior secondary schools in the state with 7,425 teaching staff which included principals and teachers.

To determine the sample size, the researcher adopted the recommendation of 10% of the target population which is seen as representative and can be generalized to the population (Mugenda & Mugenda, 2003). A sample size of 725 respondents was drawn from 235 schools which represent schools with 10 teachers and above using a stratified random sampling technique representing 10% of the population. The instrument used was a questionnaire developed by the researchers. The questionnaire was validated and the reliability was tested test-retest method, calculated with Pearson's product-moment correlation. This yielded a reliability index of 0.81. Mean scores.

The data generated were analyzed using SPSS. The research questions were answered using both mean and standard deviation and simple percentages. The results of the data analyses are presented below.

5 Result and Discussion

5.1 Types of hazards

The first question intended to determine what hazards are prevalent in Rivers State public secondary schools. This question was important because knowing the types of hazards that afflict the state schools would enable curriculum developers, educators to develop interventions that suit the target.

Questionnaire respondents and interview participants' responses are displayed in this section and compared to what scholars and policy documents say about the prevalence of disasters.

Data for these research objectives were collected through a questionnaire administered to 572 teachers in public secondary schools. The teachers were asked the type of hazards encountered and whether their schools were likely to be affected by disasters one day. This question is intended to determine whether teachers know hazards and disasters.

Table 1 below indicates the responses and displays the information in four modified Likert scale formats. Asking this question was informed by the assumption that if teachers were aware of disasters that have affected the school community in the past and were aware of hazards that were prevalent in schools, then they were likely to teach learners how to respond to disasters and hazards. This assumption was informed by Paton's model of preparedness recorded in Paton (2003 & 2007), Paton and Johnson (2001), and McIvor and Paton (2007) which places critical awareness as the center of preparedness. Paton (2003) defines critical awareness as the extent to which people think and talk about specific sources of adversity or hazards within their environment. Also, the assumption relates well to the Shiwaku *et al.* (2007) education framework reported in p. 46/47 which used the Rohrman's awareness model which states that awareness promotes action for disaster reduction in the community.

Knowledge of risk relating to hazard and disaster events

The question was included to evaluate whether the participants in the study know about disasters and hazards, or were familiar with the term “disaster and hazard” which is the core issue in understanding the need for public awareness. It was also used to distinguish the purpose of the study which focuses more on public awareness about school hazards than on pollution, which most community organizations, including the local authorities, seem to concentrate on.

Table 1 Most staff in public secondary schools have good knowledge of hazards and disasters

| Senatorial Districts | Respondents' Responses | | | | |
|-------------------------|------------------------|-------------------|--------------------|------------------|-------------------|
| | SA | A | D | SD | Total |
| Rivers South East (RSE) | 31 (5.5%) | 67 (11.8%) | 28 (5%) | 4 (0.7%) | 130 |
| Rivers East (RE) | 75(13.1%) | 161 (28%) | 71 (12.4%) | 3 (0.5%) | 310 |
| Rivers West (RW) | 32 (5.6%) | 61 (10.5%) | 30 (5.3%) | 9 (1.7%) | 132 |
| Total | 138(24.2%) | 289(50.3%) | 129 (22.6%) | 16 (2.9%) | 572 (100%) |

Source: Researchers Fieldwork, 2020

The result shows that 427 (74.5%) representing 98(17.3%) for Rivers southeast senatorial zone, Rivers East 236(41,1%) and Rivers West 93(16.1%) agreed that they have good knowledge of both hazards and disasters while the remaining 145 (25.5%) disagree to having no knowledge of hazards and disasters representing Rivers southeast 32(5.7%), Rivers East 74(12.9%) and Rivers West 39(7%). These responses suggest that a considerable amount of people have good knowledge or experience of disasters.

Awareness of hazards

This question was aimed at establishing how the participants came to know about the hazard prevailing in their school. It was also aimed at determining the interest of participants in matters that affect them and their community and also if they pay attention to them. The results are presented in Table 2.

Table 2. Hazards awareness knowledge of most school community members was gotten through Regular School meetings and training

| Senatorial Districts | Respondents' Responses | | | | Total |
|-------------------------|------------------------|-----------------|-------------------|------------------|-------------------|
| | SA | A | D | SD | |
| Rivers South East (RSE) | 7 (1.2%) | 10 (1.8%) | 53 (9.4%) | 60 (10.6%) | 130 |
| Rivers East (RE) | 25 (4.4%) | 16 (2.8%) | 102 (17.8%) | 167 (29%) | 310 |
| Rivers West (RW) | 11 (1.9%) | 6 (1%) | 44 (7.7%) | 71 (12.4%) | 132 |
| Total | 43(7.5%) | 32(5.6%) | 197(34.9%) | 295 (52%) | 572 (100%) |

Source: Researchers' Fieldwork, 2020

The results show that 75(13.1%) with RSE 17(3%), RE 41(7,2%), and RW 17(2.9%) of the participants agree that they heard about the prevailing hazards through school community meetings and training while the majority 492 (86.9%) that is, RSE 113(20%), RE 269(46.8%) and RW 115(20.1%) of the respondents disagree that they heard about the prevailing hazards via the school community meetings and training. The results indicate that participants' knowledge of hazards across the three senatorial zones was not learned through training and regular school meetings. This also indicates that future data collection during risk assessment should involve community participation taking into account indigenous knowledge and historical records.

Respondents knowledge of Hazard**Table 3:** Most people learn about hazards through media awareness and others

| Senatorial Districts | Respondents' Responses | | | | Total |
|-------------------------|------------------------|--------------------|-----------------|-----------------|-------------------|
| | SA | A | D | SD | |
| Rivers South East (RSE) | 67 (11.9%) | 46 (8.1%) | 12 (2.1%) | 4 (0.7%) | 130 |
| Rivers East (RE) | 109 (19%) | 164 (28.6%) | 22 (3.8%) | 16 (2.8%) | 310 |
| Rivers West (RW) | 46 (8%) | 70 (12.2%) | 9 (1.6%) | 7 (1.2%) | 132 |
| Total | 222(38.9%) | 280 (48.9%) | 43(7.5%) | 27(4.7%) | 572 (100%) |

Source: Researchers' Fieldwork, 2020

The result of table 3 below shows that most respondents from the three senatorial zones learned about hazards through media awareness and other means with 502 (87.8%). This means that RSE with 113(20%), RE 273(47.6), and RW 116 (20.2%) agree respectively. Similarly, 70(12.2%) with RSE and RW 16(2.8%) each and RE 46(6.6%) disagree with learning about hazards through media and other sources. The result revealed that 87.8% of the respondents learned about hazards through media awareness and other means.

Prevalent hazards in schools

According to the Pressure and Release Model (PAR Model), disaster is the intersection between socio-economic pressure and physical exposure. In other words, disaster is the result of Hazard x Vulnerability (H x V). The Model also directs attention to the conditions that make the exposure unsafe, leading to vulnerability and causes creating these conditions (Wisner *et al.* 2006). This question was included to establish all the types of hazards that prevail in public secondary schools in Rivers State to the participants.

Table 4 presents the percentage Scores of the respondents 'perception of the prevalent hazards in public secondary schools across the three senatorial zones in Rivers State. Several forms of emergency occurrence were identified and the opinion of the respondents regarding its occurrence was sort.

Table 4: Prevalent hazards in our schools

| Hazard Prevalence | Senatorial District | | | | | | | | | | | |
|---------------------------|-----------------------|----|----|-----|-----------------|-----|----|-----|-----------------|----|----|----|
| | Rivers South-East=130 | | | | Rivers East=310 | | | | Rivers West=132 | | | |
| | SA | A | D | SD | SA | A | D | SD | SA | A | D | SD |
| Floods | 68 | 38 | 14 | 10 | 174 | 93 | 29 | 14 | 80 | 28 | 19 | 5 |
| | 52% | % | % | 8% | % | % | 9% | 5% | 61% | % | % | 4% |
| Erosion | 82 | 16 | 13 | 19 | 123 | 110 | 22 | 55 | 39 | 61 | 9 | 23 |
| | 63% | 12 | 10 | 15% | 40 | 35 | 7% | 18% | 30% | 46 | 7% | 17 |
| Criminal activities | 98 | 22 | 4 | 6 | 100 | 117 | 73 | 20 | 83 | 30 | 8 | 11 |
| | 75% | 17 | 3% | 5% | 32 | 38 | 24 | 6% | 63% | 23 | 6% | 8% |
| Storm | 41 | 15 | 51 | 23 | 146 | 58 | 56 | 50 | 34 | 45 | 29 | 24 |
| | 32% | 12 | 38 | 18% | 47 | 19 | 18 | 16% | 26% | 34 | 22 | 18 |
| Environmental degradation | | 25 | | | 83 | 59 | 49 | | | 35 | | 31 |
| | 75 | 19 | 10 | 20 | 27 | 19 | 16 | 119 | 55 | 27 | 11 | 23 |
| Landslide/Mudflow | 17 | 28 | 34 | 51 | 51 | 46 | 81 | 132 | 18 | 18 | 44 | 52 |
| | 13% | 22 | 26 | 39% | 16 | 15 | 26 | 43% | 14% | 14 | 33 | 39 |
| Fire outbreaks | 23 | 14 | 43 | 50 | 125 | 110 | 6 | 69 | 13 | 14 | 24 | 81 |
| | 18% | 11 | 33 | 38% | 40 | 36 | 2% | 22% | 10% | 11 | 18 | 61 |
| Collapse of buildings | 13 | 21 | 17 | 79 | 42 | 164 | 54 | 50 | 28 | 21 | 33 | 50 |
| | 10% | 16 | 13 | 61% | 14 | 53 | 17 | 16% | 21% | 16 | 25 | 38 |
| | | % | % | | % | % | % | | % | % | % | |

Source: Researchers Fieldwork, 2020

The table shows that school teachers of the three senatorial zones responses percentage agreement is high as 106(81%) of RSE, 267(86%) of RE, and 108(82%) of RW agreed that Floods is the most prevalent hazards; followed by Criminal activities as 120(92%) of RSE respondents' responses revealed, 217(70%) RE and 113(86%) of the RW agreed on. It is also indicated that the views were in favor of agreed on which revealed that Erosion is also one of the prevalent hazards as 98(75%) of the RSE school teachers, 133(75%) of RE teachers, and 100(76%) of RW teachers' respondents' responses.

Also, it has been revealed that Environmental degradation is also a common hazard in RSE and RW Schools as 77% and 69% of the teachers responded while the responses percentage agreement of RE is low with 46% an indication that the region does not face serious Environmental degradation like that of RSE and RW. This could be due to the topography of RE and the government presence. It is observed that the respondents from RE with 66% and 60 respectively considered storms also as one of the prevalent hazards while RSE with a 44% response rate sees storms as minor hazards in their region.

However, the responses were virtually in parallel as 99(71%) of RSE and 104(79%) RW school teachers disagreed which means that Fire outbreak is not a prevalence hazards in their respective locations while RE school teachers agreed on the same item as 235(76%) represents their views.

Also, from the table, it can be deduced that certain hazards identified have a very low tendency or likelihood of occurring as they were rated very low across the senatorial zones in the list of hazards identified. In line with this, building collapses in RE with 206(67%) is also one of the prevalent hazards while RSE and RW perceived it as a minor hazard as 26% and 37% respectively while on Landslide/ Mudflow, respondents across the three senatorial zones do not agree as a prevalent hazard due to low tendency or likelihood of occurring as they were rated very low across the senatorial zones in the list of hazards identified.

The disaster risk assessment process should be consultative to allow infiltration of indigenous knowledge such as that of the hazards identified by participants. Such information can then flow into the awareness programs to ensure that all staff and students are not only aware of the hazards, but are better prepared to deal with the impact of such hazards.

Knowledge on what to do during hazardous incidents

Levine (1989) in the discussion on the methods of assessing and reducing injury from emergencies, states that emergencies are complex and often not well understood. She states that it is not only the local emergency personnel that do not understand emergencies but also the general public because emergency materials are relatively unstable and capable of changing. Schools should be prepared through awareness and information programs relating to hazards associated with School activities. The question was included to determine if the participants, as part of the school community, are aware of the procedures to follow during hazardous incidents.

Table 5: Majority of our staff and students know what to do in case of emergency

| Senatorial Districts | Respondents' Responses | | | | Total |
|-------------------------|------------------------|-----------------|---------------|---------------|-------------------|
| | SA | A | D | SD | |
| Rivers South East (RSE) | 21(3.7%) | 5 (0.9%) | 51 (9%) | 53 (9.4%) | 130 |
| Rivers East (RE) | 50 (8.7%) | 12 (2.1%) | 136 (23.7%) | 112 (19.5%) | 310 |
| Rivers West (RW) | 17 (3%) | 9 (1.6%) | 58 (10.1%) | 48 (8.3%) | 132 |
| Total | 88(15.4%) | 26(4.6%) | 245(%) | 213(%) | 572 (100%) |

Source: Researchers Fieldwork, 2020

The results of table 5 reveal that the teachers from the three senatorial zones' responses were in favor of disagreed and strongly disagreed. But the percentages of the two options were calculated to disagree in this explanation. Out of 572(100%) of the participants, 458(79%) indicated that 248(43.2%) of RE, 106(18.4%) RW, and 104(18.4%) RSE of the school teacher's responses disagreed that the Majority of our staff and students know what to do in case of emergency while the remaining 114 of the school teachers from the three zones agreed on the same item as 21% represents their views. The percentage of participants who are not aware is too high and indicates that much can be done to educate both teachers and students in schools on emergency procedures.

Possibility of Threat to Schools in future

The study further solicited information on whether their schools could be affected by disasters in the future.

Table 6: Respondents' perception on if schools could be seriously affected by disasters in the future.

| Senatorial Districts | Respondents' Responses | | | | Total |
|-------------------------|------------------------|-------------------|-------------------|------------------|-------------------|
| | SA | A | D | SD | |
| Rivers South East (RSE) | 76(13.4%) | 33 (5.8%) | 15 (2.7%) | 6 (1.1%) | 130 |
| Rivers East (RE) | 158(27.5) | 121(21.1%) | 17 (3%) | 14 (2.4%) | 310 |
| Rivers West (RW) | 61(10.6%) | 48(8.4%) | 19 (3.3%) | 4(0.7%) | 132 |
| Total | 295(51.5%) | 202(27.5%) | 51 (16.8%) | 24 (4.2%) | 572 (100%) |

Source: Researchers Fieldwork, 2020

As shown in table 6, the majority of the respondents 497(86.8%) reported that their schools could be affected by disasters in the future which attracted their highest percentage responses of 109(19.2%), 279(48.6%), and 109(19.2%) by the teachers of RSE, RE, and RW respectively while only 75(13.2%) of the respondents did not think their schools would ever be affected by disasters in future indicating they disagreed responses as RSE 21(3.8), RE 31(5.4%) and RW 23(4%).

To motivate the answers given in the previous question 70% of respondents mentioned that disasters were natural events and therefore they were unpredictable and anything could happen at any time. Other respondents representing 20% of the category of strongly agree and agree commented by saying that their schools were located near a stream that could cause floods. A respondent commented that because of global warming and climate change, anything could happen at any time without warning. Another respondent commented that: “Also: “he thinks their school can be affected because the weather in Rivers State changes radically”.

Based on their comments, respondents in this study strongly believed that their schools could be affected by disasters one day.

Respondent’s Perception of the School reaction to emergencies

To provide an answer to the stated question, data was collected from teachers of the three senatorial zones via the instrument Disaster Preparedness of Public Secondary Schools opinion questionnaire. The analysis of the data collected is presented in table 7.

Table 7: Reaction to emergencies in your schools

| Reactions | Senatorial District | | | | | | | | | | | |
|-----------------------------|-----------------------|-----------|-----------|-----------|-----------------|------------|------------|------------|-----------------|-----------|-----------|-----------|
| | Rivers South-East=130 | | | | Rivers East=310 | | | | Rivers West=132 | | | |
| | SA | A | D | SD | SA | A | D | SD | SA | A | D | SD |
| Panic and confusion | 99 76% | 23 18% | 3 2% | 5 4% | 173 56% | 119 38% | 12 4% | 6 2% | 113 86% | 13 9% | 5 4% | 1 1% |
| Curious onlookers | 76 58% | 38 29% | 15 12% | 1 1% | 163 53% | 84 27% | 46 15% | 17 5% | 90 68% | 18 14% | 17 13% | 7 5% |
| Quick response at the scene | 11 8% | 5 4% | 61 47% | 53 41% | 18 6% | 22 7% | 99 32% | 171 55% | 13 10% | 11 8% | 39 30% | 69 52% |
| Evacuation of students | 2 2% | 5 4% | 76 58% | 47 36% | 6 2% | 10 3% | 134 43% | 160 52% | 7 5% | 1 1% | 28 21% | 96 73% |

Source: Researchers Fieldwork, 2020

The respondents were asked to state their views on the schools' reactions in case of disasters. Result shows the respondent's opinions on the School's reaction to emergencies. From the table it can be observed that school teachers of RSE, RE, and RW agreed on certain key issues: About 122(84%) of the RSE school teachers, 292(94%) RE teachers, and 126(95%) Of RW teachers agreed that there were Panic and confusion, and the presence of Curious onlookers as can be seen 114(87%) RSE school teacher's responses, 247(80%) RE and 108(82%)of the RW teachers shows. The table also reveals that there was a Quick response at the scene as 114(88%) of school RSE teachers, 270(87%) RE and 103(82%) RW teachers' responses disagreed on while the respondents equally disagreed on the Evacuation of students which means evacuation of students was not possible due to lack of training as 123(94%) of RSE school teachers, 294(95%) and 124(94%) of the RW teachers' responses revealed. This also implies that most school community members did not know what to do when disasters occur which would therefore subject them to the suffering that can be avoided.

Effects of the Disaster in Schools

Previous studies have shown that the effectiveness of a school disaster preparedness plan is measured in the precious lives of students, teachers, and administrators that are left unharmed following an incident of school-based violence, an accident, a natural disaster, or another hazard, (Librera, 2004).

Table 8: The effects of emergency that struck your school

| Effect Of emergency | Senatorial District | | | | | | | | | | | |
|----------------------------------|-----------------------|-----------|-----------|-----------|-----------------|------------|-----------|------------|-----------------|-----------|-----------|-----------|
| | Rivers South-East=130 | | | | Rivers East=310 | | | | Rivers West=132 | | | |
| | SA | A | D | SD | SA | A | D | SD | SA | A | D | SD |
| School closure | 95 75% | 12 9% | 12 9% | 9 7% | 177 57% | 102 33% | 19 6% | 12 4% | 67 51% | 51 39% | 8 6% | 6 4% |
| Destruction of property | 86 66% | 30 23% | 10 8% | 4 3% | 80 26% | 155 50% | 52 17% | 23 7% | 66 50% | 34 26% | 20 15% | 12 9% |
| Physical injuries to individuals | 30 23% | 13 11% | 36 28% | 51 39% | 88 28% | 57 18% | 47 15% | 118 38% | 37 28% | 25 19% | 20 15% | 50 38% |
| Loss of life | 16 12% | 5 4% | 23 18% | 86 66% | 39 13% | 12 4% | 57 18% | 202 65% | 16 12% | 6 5% | 24 18% | 86 65% |

Source: Researchers Fieldwork, 2020

Table 8 shows the opinion of the RSE, RE, and RW teachers regarding the effects of the emergency that struck their schools in the state. The respondents believed that the effect of the disaster led to School closure. This attracted the percentage responses of 107(84%), 279(90%), and 118(90%) by the school teachers of RSE, RE, and RW respectively.

The table revealed also, that in most cases the school teachers' responses from the three senatorial zones were favor of strongly agreed and agreed that the effect of the disaster led to the destruction of property which attracted 116(89%) of RSE, 235(76%) RE and 100(76%) of RW teachers. This is an indication from the results that RSE schools experienced more of the property destructions. However, on the other hand, the respondents were in favor of disagreed and strongly disagreed in areas of Physical injuries to individuals as 87(66%) RSE, 165(53%) RE, and 70(53%) RW while on Loss of life, the respondents also favored disagreed and strongly disagreed option which is rated in high percentage as 109(84%) of RSE, 259(83%) of RE and 110(83%) of RW teachers respectively. When the school property is destroyed, students are seriously affected as they struggle to cope with the remaining existing facilities.

5.2 Perception of Teachers to Disasters in Secondary Schools

The questionnaire here dealt with items on the Level of disaster perception by teachers in Rivers state public secondary schools. An evaluation of the disaster perception by teachers of the various public secondary schools across the three senatorial zones in Rivers State was carried out with the result of the analysis of the respondent perception are as shown in Table 9.

Table 9: Perception of teachers on disaster dimensions

| Perception of Disaster Dimensions | Senatorial District | | | | | | | | | | | |
|--|-----------------------|----|----|----|-----------------|-----|----|----|-----------------|----|----|-----|
| | Rivers South-East=130 | | | | Rivers East=310 | | | | Rivers West=132 | | | |
| | SA | A | D | SD | SA | A | D | SD | SA | A | D | SD |
| Rain related disaster such as Precipitation/ flooding disrupt teaching and learning activities | 105 | 21 | 3 | 1 | 175 | 102 | 24 | 9 | 87 | 32 | 9 | 4 |
| | 81 | 16 | 2% | 1% | 56 | 33 | 8% | 3% | 66 | 24 | 7% | 3% |
| | % | % | | | % | % | | | % | % | | |
| Physical facilities related disasters contribute to low performance by the students during examination | 93 | 34 | 3 | - | 150 | 96 | 56 | 8 | 73 | 29 | 24 | 6 |
| | 72 | 26 | 2% | - | 48 | 31 | 18 | 3% | 55 | 22 | 18 | 5% |
| | % | % | | | % | % | % | | % | % | % | |
| Transport-related disaster Preventing students and teachers from coming to school. | 95 | 15 | 9 | 11 | 72 | 200 | 22 | 16 | 45 | 61 | 21 | 5 |
| | 73 | 12 | 7% | 8% | 23 | 65 | 7% | 5% | 34 | 46 | 16 | 4% |
| | % | % | | | % | % | | | % | % | % | |
| Excessive cold from climate change-related disaster frustrate student's participation in learning objectives | 81 | 15 | 21 | 13 | 72 | 165 | 40 | 33 | 70 | 31 | 10 | 21 |
| | 62 | 12 | 16 | 10 | 23 | 53 | 13 | 11 | 53 | 23 | 8% | 16% |
| | % | % | % | % | % | % | % | % | % | % | | |
| Instructional materials cannot be adequately used due to poor environmental conditions. | 79 | 34 | 12 | 5 | 139 | 109 | 21 | 41 | 71 | 32 | 22 | 7 |
| | 61 | 26 | 9% | 4% | 45 | 35 | 7% | 13 | 54 | 24 | 17 | 5% |
| | % | % | | | % | % | | | % | % | % | |

Source: Authors' Fieldwork, 2020

From the result, it can be observed that out of the five (5) items, one and two (1-2) on Rain related disaster such as Precipitation/ flooding disrupt teaching and learning activities, and Physical facilities related disasters contribute to low performance by the students during the examination which RSE have the highest percentage scores of 97%, 98% reflecting perception on disaster dimension in teaching and learning; RE with the percentage scores of 89%, 79% and RW with 90% and 77% respectively. On transport related disasters preventing students and teachers from coming to school, 110(85%) of RSE, 272(88%) RE, and 106(80%) of RW teachers agreed and strongly agreed that transport-related disasters preventing students and teachers from coming to school. 96(74%) of RSE, 237(76%) RE and 101(76%) of RW agreed that excessive cool from climate change-related disaster frustrates student's participation in learning objectives.

Also, Instructional materials cannot be adequately used due to poor environmental conditions attracted respondent's responses as 113(87%) of RSE, 248(80%) of RE, and 103(78%) of RW teachers agreed and strongly agreed to the statement.

6 Conclusion and Recommendation

Based on the findings of the study, it can be concluded that: Most schools in Rivers State had experienced hazardous events and therefore the awareness level in the region was high. The most common hazard faced in schools was flooded; this can be attributed to the schools' uncontrollable rainfall, altitude, sea rise due to climate change, and poor sanitation in the state.

Based on data collected and analyzed the researcher recommends that:

1. Each school should have a disaster awareness and preparedness department whose head should be recognized by the Teachers Service Commission. The members of this department should be conversant with disaster management and first aid measures
2. The Ministry of Education should introduce the disaster preparedness theory and practice into schools' and training institutions' curriculum at all levels. This will equip the members.

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