



## **Incidence of Anxiety among Flood Victims in Some Selected Communities in Rivers State**

<sup>1</sup>Bright, Ikechukwu Bethel (PhD); <sup>2</sup>Chidi-Nwankwo, Nancy Ipirinye (PhD) & <sup>3</sup>Ezems-Amadi, Glory (PhD)

<sup>1</sup>Government Secondary School (UBE)  
Emohua, Port Harcourt, Rivers State, Nigeria  
08033380312, [brightikechukwu22@gmail.com](mailto:brightikechukwu22@gmail.com)

<sup>2</sup>Department of Social Services,  
University of Port Harcourt Teaching Hospital (UPTH)  
Port Harcourt, Rivers State, Nigeria  
07032912325, [nancyhidinwankwo@gmail.com](mailto:nancyhidinwankwo@gmail.com)

<sup>3</sup>No 20, Springs Boulevard,  
Suncity, Abuja, Nigeria  
08037057693, [gloryezems@yahoo.com](mailto:gloryezems@yahoo.com)

### **ABSTRACT**

The investigated the incidence of anxiety among flood victims in communities in Rivers State. One research question and one hypothesis were used to carry out the study. The design of the study was descriptive survey. Population of the study was 830,000 victims of flood disaster in 4 LGAs in Rivers State namely Abua/Odual, Ahoada East, Ahoada West and Ogba/Egbema/Ndoni. A sample size of 450 flood victims were sampled for the study while the sample size was determined using Taro Yamane formula and stratified random sampling technique used to draw the sample for the study. A 10-items questionnaire tagged "Incidence of Anxiety among Rivers State Flood Victims Questionnaire" (IARFVQ) was used to collect data for the study. The questionnaire was face and content validated by one Measurement and Evaluation expert in University of Port Harcourt. Reliability of the instrument was determined using Cronbach alpha statistic with an index of 0.71. There were 450 copies of questionnaire administered out of which 383 copies (85.1%) were retrieved. Research question was answered using mean and standard deviation while the hypothesis was tested using one-way Analysis of Variance (ANOVA) at 0.05 level of significance. The findings of the study revealed that victims of flood disaster in the study area felt irritated, angered, and afraid of their future among others. It was also revealed that there was no significant difference in the opinion of the respondents of the study on the incidence of anxiety among flood victims in communities in Rivers State. The study recommended among others that flood victims should be provided immediate counselling services to minimize the effect of anxiety on them.

**Keywords:** Incidence, Anxiety, Flood Victims, Communities, Rivers State

### **INTRODUCTION**

Flooding remains a major natural disaster encountered by man with the release of excessive water beyond the absorptive ability of the soil as its cause (Ologunorisa, 2001). It accounts for a good number of the losses encountered in our society and cuts across different parts of the globe including Africa, Nigeria and Rivers State in particular. Amadi (2013) stated that the level of flooding lies on the quantity of rainfall in

the season and absorptive ability of the soil after the rainfall. In Rivers State flooding has been a serious disaster that has affected the state for decades. It has affected different locations in the state due to different man-made and natural factors. Chiadikobi, Omoboriowo, Chiaghanam, Opatola and Oyebanji (2011:288) pointed out that, the overflow of Ntawogba creek in 2002 and 2004 caused untold hardship to inhabitants living along the streets bordering the creeks in Port Harcourt. Disposal of refuse into the creeks is another contributing factor. The flooding experience during this time was as an effect of the unlawful and inappropriate dumping of refuse on water canals.

The movement of water from creeks causes flooding when a huge body of water is hindered from flowing because of blockages from refuse deposits. This was the effect of flooding experienced in the state between 2002 and 2004. There are diverges subsequent flooding that affected the state. Akpokodje (2007) identified the incidence of flood in the Rivers State in 2006 and 2007. He stated that the flooding in 2007 was lower than what was experienced in the preceding year. The 2006 flooding in Rivers State therefore had diverse damages that came along with it when compared to that of the subsequent year. These damages affected properties and lives in various degrees.

In 2012, most states in the Nigeria were similarly affected by different magnitude of flood cases including Rivers state. It was stated by Social Action (2012) that over 183 communities in four local government areas of Rivers State namely: Ahoada East, Ahoada West, Abua/Odual and Ogba/Egbema/Ndoni were seriously affected. It was recorded that about 830,000 people were said to have been involved in the flood incident (Social Action, 2012). This disaster created huge losses because of the poor management of the environment. Offiong (2011) stated that most Nigerians who work in petroleum industries and other similar hazardous industries are unaware of the ecological effects of the chemicals they are subjected to. Even though they are aware, they hardly have the notion of leaving the place as a result of fear of unemployment, while they are not really knowledgeable of the extent of the hazards, they suffer due to their level of illiteracy as well. Beck, Emery and Greenberg in Deacon and Abramowitz (2004:430) stated that “anxiety disorders in particular are believed to result from distorted beliefs focused on psychological threat and an improved sense of personal vulnerability”. Victims of natural disaster are anxious because of the change in expectation or belief in their physical condition. Flood disasters victims usually show anxiety in attend to recover their losses.

It is common to observe people exhibit anxiety in a situation where they desire to overcome their challenges and recover their belongings. Flood victims are particularly anxious because of the fear of the unknown. They are doubtful about the possibility of regaining their loss estate and desire to go back to their initial position. Victims of natural disaster are anxious to seek for help, and also anxious to recover the resources that are left after the event of the downpour so that they can have resources to depend on. Anxiety is a condition of belief; it is comes out of the expectation that things can never remain the same after a natural disaster like flooding has occurred. In this case, the victim expects that except for some personal effort and quick intervention, they may not leave a comfortable life again. This puts the victim in a condition where they have to strive hard for their condition to come back to normal. This situation builds up the anxiety level of the victim.

The United Nations Educational, Scientific and Cultural Organization in Rabalao (2010:13-14) stated that “there are diverse types of floods which become disasters when they have negative influence on human settlements. The seasonal orriver floods are caused by seasonal rainfall over large settlement areas, melt of snow or a mixture of these. Flash flood or tropical storms are accompanied by heavy rainfalls that can be too much for the rivers and streams to finger, and they overflow and produce the floods. The coastal floods submit to a situation where storms, winds and other events cause ocean water to overflow and lead to onshore flooding. Flooding is therefore an environmental disaster that arises because of the excessive water flow. Okonkwo (2013) stated that the Oxford Advanced Learners Dictionary defined flood as an overflow wing or eruption of a great body of water over land not usually submerged. This environmental hazard is because of uncontrolled water flow out from its banks or boundaries. West (2010:13) stated that “floods are natural phenomena that occur when streams, lakes and rivers overflow their banks”. The water bank is usually high than the altitude of the surrounding environment. When this boundary is exceeded, it

permits the run-off of excess water over all surrounding environment. This causes the flow of water into areas they are not required. This is accountable for the extent of environmental hazard that is created during this era.

The magnitude of water in a given environment is usually decided by the amount of rainfall in the environment which causes the major water bodies such as oceans, seas and rivers to overflow their boundary. Suleiman, Matazu, Davids and Mozie (2014:54) stated flooding is commonly cause by heavy downpours of rains on flat ground, melting of snow, reservoir failure, volcano and or glaciers. The addition of water from rainfall into any collection of water above the land level leads to the overflow of excess water into areas anywhere they are not desired Similarly, Ologunorisa (2001) described flood as any abnormally high water which can cause property damage, traffic destruction, and nuisance and health hazard. In this case, the quantity of water released can either be from above the earth level from rainfall or under the earth when the water table under the ground is greatly exceeded.

### **Flood Disaster and Anxiety among Victims**

It cannot be argued that individuals who have been exposed to flood disaster at one point or the other in their life do not want a reoccurrence of such disaster. This could usually be common among individuals who recorded losses during previous disasters. These individuals are usually anxious when they perceive that what happened in past may repeat itself. Anxiety usually builds in victims who have experienced flood disaster in the past and have lost either lives or properties. Such individuals are always at alert in case of another disaster. This situation however affects their psychological balance. Victims of flood disaster are usually anxious for fear of having to repeatedly move from one location to another. This could usually be common when such victims have been made to change residence or occupation because of previous flooding. This experience makes it hard for previous victims to handle with a re-occurrence. When there is a flood disaster, victims who survive develop a common sense of anxiety when they think of the pains and challenges, they will have to handle it when there is a repetition. This sometimes results to some unusual behaviours in the victims. Anxiety is higher when victims of flood disaster have the opinion, they are not likely to receive help in the event of a flood (Tapsell, 2001). The past challenges that flood victims face contributes to their anxiety level. When victims of flood disaster are sure of receiving help form individuals and institutions, they have very small to worry about. However, anxiety is usually higher in flood victims when they know that they have a much to lose and cope with in the event of a flood. This makes them anxious and will lead to various types and degrees of traumatic experiences. When there are adequate preparations in the incident of a flood, it cut the level of anxiety in the mist of those who are likely to be affected. The sign of anxiety shown by flood victims are largely because of the unavailability of protective measures. Flood disaster victims usually shows signs of panic when they are confronted with natural disasters that are similar to flooding. This panic sometimes makes victims to unnecessarily be watchful while some other show signs of inability to fall asleep or stay asleep.

There are various symptoms that are displayed by victims of flood disaster who have developed anxiety. There are victims of flood disaster who do not like to see or hear anything that has to do with flood disaster. The sight of water also makes such victims afraid as they anticipate a recurrence of the flood. Anxiety in flood disaster victims can be for a short or long time. Similarly, any anxiety that is not properly controlled can lead to depression. Similarly, victims who are faced with anxiety because of their past experiences with flood disaster are likely to grow some other bad habits as a way of dealing with anxiety. It is also vital to note that while individuals may be faced with stress and depression, many people may likely be faced with the problem of anxiety at the same time especially when they were collectively faced the problem of flooding at the same time (Reavley, Allen, Jorm, Morgan & Purcell, 2010). This makes anxiety one of the main psychological special effects of flood disaster on victims. This situation can however be corrected with the exercise of various therapeutic treatment.

### **Aim and Objective of the Study**

The aim of the study was to investigate the incidence of anxiety among flood victims in communities in Rivers State. Specifically, the study sought to:

1. determine the anxiety experiences of flood victims in communities in Rivers State

**Research Question**

The following research question was answered in the study:

1. What are the anxiety experiences of flood victims in communities in Rivers State?

**Hypothesis**

The following hypothesis was tested in the study:

1. There is no significant difference in the mean ratings of flood victims on their anxiety experiences in communities in Rivers State

**METHODOLOGY**

Design used for the study was descriptive survey. The population of the study was 830,000 victims of flood disaster in 4 LGAs in Rivers State namely Abua/Odual, Ahoada East, Ahoada West and Ogba/Egbema/Ndoni (Social Action, 2012) out of which a sample size of 450 flood victims were drawn for the study. The sample size was determined using Taro Yamane formula while stratified random sampling technique used to draw the sample for the study. A 10-items questionnaire titled “Incidence of Anxiety among Rivers State Flood Victims Questionnaire” (IARSFVQ) was used for data collection. The questionnaire was face and content validated by one Measurement and Evaluation expert in University of Port Harcourt. Reliability of the instrument was determined using Cronbach alpha statistic with an index of 0.71. Out of the 450 copies of questionnaire administered, 383 copies (85.1%) were retrieved. The research question was answered using mean and standard deviation while the hypothesis was tested using one-way Analysis of Variance (ANOVA) at 0.05 level of significance.

**PRESENTATION OF RESULTS**

**Research Question:** *What are the anxiety experiences of flood victims in communities in Rivers State?*

**Table 1: Mean and Standard Deviation scores of anxiety experiences of flood victims in communities in Rivers State**

S/No	Items	Married		Unmarried		Divorced		Mean Set	Remark
		Mean	SD	Mean	SD	Mean	SD		
1	Feeling irritable or having angry outbursts	2.43	1.15	3.05	0.86	2.32	1.02	2.66	Agreed
2	Feeling as if my future will somehow be cut short	2.40	1.16	2.75	1.08	2.84	1.09	2.61	Agreed
3	Being super alert or watchful on guard	2.70	1.11	2.75	1.04	2.59	1.21	2.70	Agreed
4	Feeling jumpy or easily startled	2.41	1.20	2.46	1.16	2.11	1.15	2.39	Disagreed
5	I am always nervous under the rain or during rainy season	2.35	1.15	2.07	1.14	2.43	1.08	2.43	Disagreed
6	I usually have phobia for the sign of water	2.36	1.15	2.38	1.30	2.39	1.20	2.37	Disagreed
7	I am always afraid when I hear or see natural disaster	2.45	1.18	2.82	1.03	2.21	1.14	2.57	Agreed
8	I am tensed when I hear people talking about flood	2.11	0.98	2.44	1.19	2.59	1.16	2.31	Disagreed
9	I have problem falling asleep after the flood	2.39	1.15	2.60	1.23	2.46	1.26	2.48	Disagreed
10	Fear to be the centre of attention	2.37	1.04	2.60	1.03	2.73	1.10	2.51	Agreed
<b>Grand Mean and Standard Deviation</b>		<b>2.40</b>	<b>1.12</b>	<b>2.59</b>	<b>1.11</b>	<b>2.45</b>	<b>1.14</b>	<b>2.50</b>	<b>Agreed</b>

Table 1 shows that the item means scores of the married victims of flood disaster on the anxiety related challenges are 2.43, 2.40, 2.70, 2.41, 2.35, 2.36, 2.45, 2.11, 2.39 and 2.37 respectively for items 21-30. These indicated that only anxiety related challenge that corresponds to item 23 which is being super alert or watchful on guard is the only anxiety related challenge that the married victims of flood disasters experienced to high extent. This is because item 23 is the only item that had a mean score above the criterion mean of (2.50). These invariably means that anxiety related challenges such as feeling irritable or angry outbursts, feeling as if their future will somehow be cut short, easily startled, feeling of nervous, phobia for any sign of water, afraid of nearing or seeing any natural disaster, tensed on nearing of flood, sleeping difficulty, fear to be the centre of attention, are regarded as the anxiety related challenge experienced at a low extent by the married victims of flood disaster. This is because their items mean score are below 2.50, it is also shown in table 4.5 that the mean scores of the unmarried victims of flood disasters on the item statements on anxiety-related challenges are 3.05, 2.75, 2.75, 2.46, 2.07, 2.38, 2.82, 2.44, 2.60 and 2.60 respectively for items 21 to 30. Thus, it is obvious that the unmarried victims of flood disasters experienced anxiety related challenges that correspond to items 21, 22, 23, 27, 29 and 30 at high extent. They are feeling irritable, feeling as if their future will somehow be cut short, being super alert or watchful on guard, always afraid on nearing or seeing natural disaster, difficulty in sleeping and fear to be the centre of attention. These ones are regarded as anxiety-related challenges experienced by the victims of flood disaster because the items mean scores corresponding to these statements are above 2.50, the criterion mean.

On the other hand, the unmarried victims of flood disasters did experience getting easily startled, feeling of nervous during rainy season, phobia for any sign of water and being tensed or hearing people talking about flood at a low extent. This is because their items mean scores are up to 2.50, the criterion mean and above. These statements correspond to item 24, 25, 26, and 28 respectively. Furthermore, table 1 also shows that for the divorced victims of the flood disasters their mean scores on the item statements are 2.32, 2.84, 2.89, 2.11, 2.43, 2.39, 2.21, 2.59, 2.46 and 2.73 respectively for items 21 to 30 that means only anxiety related statements corresponding to items 22, 23, 28 and 30 are the anxiety-related challenges the divorced group of the victims of flood disaster experienced at a high extent, they were; feeling as if their future will be somehow cut short, being super alert or watchful on guard, being tensed on hearing people talking about flood and then fear to be the centre of attention. These ones are the anxiety-related challenges the divorce group of the flood victims had at a high extent because their corresponding items mean scores are above the criterion mean of 2.50.

However table 1 shows that on the other hand, the divorced victims of flood disaster did experienced anxiety-related challenges such as being irritable, easily startled, and nervous during rainy season, phobia for any sign of water, always afraid to hear or see any natural disaster and difficulty in sleeping at a low extent. These anxiety-related challenges stated are experienced at a low extent by the divorced victims of flood because the mean score of the corresponding items are below the criterion mean of 2.50. Moreover, on general consideration of the victims of flood disasters irrespective of their marital status, it is shown on table 1 that the items mean scores are 2.66, 2.61, 2.70, 2.39, 2.43, 2.37, 2.57, 2.31, 2.48 and 2.51 respectively for items 21 to 30. That means the victims of flood disasters irrespective of their marital status experienced the following anxiety related challenges corresponding to items 21, 22, 23, 27 and 30 at a high extent. They are being irritable, feeling as if their future will somehow be cut short, being super alert or watchful on guard, always afraid on hearing or seeing any natural disaster, and fear to be the centre of attraction. These ones are regarded as their anxiety-related challenges as a high extent because their corresponding items mean score are above the criterion mean of 2.50. On the other hand, victims of the flood disaster at the general level did experienced the following anxiety-related challenges at a low extent getting easily startled, nervous, phobia for any sign of water, tensed on hearing people talked about flood and difficulty in sleeping. This is because the items mean scores corresponding to the statement are not up to 2.50 and above.

**Hypothesis One:** There is no significant difference in the mean ratings of flood victims on their anxiety experiences in communities in Rivers State

**Table 2: Summary of Analysis of Variance of no significant difference in the mean ratings of flood victims on their anxiety experiences in communities in Rivers State**

Sources of variance	Sum of squares	df	Mean squares	Sig.	Decision
Between groups	361.30	2	180.65	0.252	Failed to reject
Within groups	49610.50	195	130.55		
Total	49971.80	188			

The results in table 2 revealed that the level of significant of 0.252 was ( $P > 0.05$ ). This implied that there was no significant difference in the mean ratings of flood victims on their anxiety experiences in communities in Rivers State.

### DISCUSSION OF FINDINGS

The responses from the various respondents used in the research work concerning stress and flood victims revealed that persons who are married have a way of managing stress better than those who are divorced while the unmarried are in-between. This could mean that divorced people have psychological challenges which they are passing through and which are compounded whenever there is a flood. This explains why Abdullah, Sipon, Radzi and Ghani (2015) noted that the stress experienced by victims of flood could range from moderate to severe level. This may be based partially on the marital status of the victim. Similarly, it was revealed that victims of natural disaster whether married, unmarried or divorced have a form of internal fear whenever there is rainfall. This may be because they are afraid of a re-occurrence of those ugly experiences they had over the years on the dangers of flooding. Married and divorced respondents also show that they find it hard to remember basic information following the flood. The problem of flood disaster may have compounded the problem of this class of inhabitants and make them forgetful. Unmarried respondents married and divorced all show indications that they frequently have disturbing thoughts after a flood. This experience may have been built from the experiences they had in the last flood disaster.

The responses provided indicated that victims of natural disaster who are single show symptoms of anger while the married victims indicated they lose focus on what the future holds. This is based on the fact that they have enormous responsibilities to attend to which may have been jeopardized by the disaster. The various victims of natural disaster from their responses indicated that they don't have phobia for water. This implies that victims of flood disaster over time develop resistance against fear of flooding in the future. Nasir, Zainah and Khairudin (2012) noted that the development of psychological skills for managing flood disaster is a way of overcoming anxiety for flooding. The unmarried respondents indicated that they only feel afraid for a while. This usually happens before the flood but they are able to quickly adjust and deal with the consequences of the flood. The unmarried and divorcees show higher symptoms of anxiety to flooding than the single. This can better be explained that the fear of the brunt of the flood on people of their immediate family heightens their anxiety level in the event of a disaster. The various socio-psychological factors affecting flood victims affects everyone irrespective of their gender and marital status. In the event of a flood, all individuals irrespective of status are equally affected although this may be at a different scale of magnitude (Ugwu & Ugwu, 2013). This therefore shows that the strategy for coping with this disaster must differ to an extent across gender. Duncan (2007) also stated that in the incident of a flood; most women cannot run and therefore account for more death during flood disaster than men. Flood disaster also has more psychological impact on women rather men is because of the low level of way in to quality education and training programmes, inadequate maternal health programmes in the country, low access to financial aid, mood swings etc. This reveals why more women are exposed to more socio-psychological problems of flooding than the men.

## CONCLUSION

The study concluded as follows:

1. The marital status of flood victims does not determine their anxiety experience in communities in Rivers State.

## RECOMMENDATIONS

The following recommendations were made based on the findings of the study:

1. There is need for immediate counselling of flood victims to cushion the effects of flood disaster especially in the management of anxiety to avoid further psychological complications.
2. Government should provide relief materials to flood victims to reduce the possibility of anxiety after flooding.

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