

VULNERABILITY AND COPING STRATEGIES OF FLOOD VICTIMS IN URBAN AND RURAL AREAS IN NIGERIA: A THEORETICAL PERSPECTIVE

By

Dr. (Mrs) Glory Ezems-Amadi

*Department Of Educational Psychology Guidance and Counselling, Faculty Of Education,
Bingham University Karu, Nasarawa State*

Email gloryezems@yahoo.com

Abstract

Over the years, flooding has been a major environmental hazard causing various degrees of damage to people and the society at large both socially, psychologically, economically and otherwise. However, people are exposed to flood disaster whether in rural and urban areas and as such the need to devise coping strategies across all levels. The study therefore highlights coping strategies for dealing with flood disaster in rural and urban areas. These strategies include creating awareness, flood insurance among others. Data for the study were collected using secondary sources such as textbooks, journals and the internet. The study was qualitative in nature as a result of the sources of data used for the study. The study pointed out the need for stakeholders to collaborate in the process of coping with the aftermath of flooding in rural and urban areas in Nigeria.

Keywords: coping strategies, flood victims, urban and rural areas, Rivers State, Theoretical perspective

Introduction

Flooding is literally an overflow of water on the land surface. Scholars such as Nwigwe and Emberga (2014) also pointed out that flooding is an overflow of water on a previously dry land either by natural or man-made reasons. Flooding can therefore occur in rural or urban areas as a result of natural or man-made factors. Nwigwe and Emberga (2014:309) pointed out that the natural cause of flooding in any of these areas include heavy or torrential rains/rainstorm as well as oceans storms and tidal waves usually along the coast while the man-made causes includes bursting water main pipes, dam burst as well as dam spills. When any of this occur, the extent to which people in that area can survive its after effects depend on their coping strategies.

Vulnerability of Flood Victims in Urban and Rural Areas

The degree of harm caused by any environmental hazard such as flooding is based on the level of awareness of the people within that environment. Individuals who are well prepared for a disaster are less affected at its occurrence compared to those individuals who are not prepared. Vulnerability "is used to understand a group's overall susceptibility to any negative consequences that will throw them deeper in poverty or even tip them into destitution" (Practical Action, 2010:5). When the residents of a place are not ready for the days of disaster, it makes them to loss things in the event of any environmental hazard. Flooding as an environmental hazard increases the chances of dependency of the citizens on the government (Hollander, 2003). This is for the reason that the effect of flooding cannot be easily measured. It is also one of the various environmental hazards that people do not often prepare for. The residents of the flood prone environment are therefore dependent on the government whenever flood takes over their

area and more often the dependency level is very much because the people are tremendously vulnerable due to late preparation. Nabegu (2014:26) stated that:

Floods have major impacts on the socio-economic well-being of households in developing countries, whether in the rural or urban informal sectors as they are often overwhelmed by shocks that include unemployment, loss of livelihood, assets, injury, death, disease etc., which leads to immediate hardships that compel household to make decisions with serious long term consequences.

When these challenges arise, help must be required from individuals within and outside the natural disaster area in order to assist the victims get better from the damages caused. There are diverse descriptions which have been given to the idea of vulnerability by researchers (Cutter, Mitchell & Scott, 2000). The concept of vulnerability depends on the degree of contact of the residents of a place to any natural disaster. Individual, societal and national preparedness therefore determines disaster victim's level of vulnerability. Wisner, Blaikie, Cannon and Davis (2004) defined vulnerability as the level of awareness of a society before disaster strikes. It is usually cheaper to put in place appropriate safety measures to help cushion the effect of a disaster before its occurrence than trying to manage the situation after it has occurred. Vulnerability is therefore determined by how prepared the individuals of a community are for an unforeseen natural disaster. Similarly, Keith (2008:8) pointed out that:

Vulnerability refers to the susceptibility of people, communities and regions to hazards. Vulnerability can be influenced by many factors such as location, building standards, the level of preparedness and the ability to evacuate and carry out emergency operations.

This is the factors that expose the people to more danger is because of natural or man-made practices decide on the level of vulnerability. Similarly, Khan and Khan (2008:45) stated that "*Vulnerability may be seen as "the degree to which a community, structure, services or geographic area are damaged or disrupted by the brunt of particular hazard"*". Flood vulnerability is therefore measured by the unlawful practices of the dwellers which expose them to greater problems in the frequent occurrence of a flood and the availability of support materials when the flood finally occurs. UNDP (1992) in Nabegu (2014) posited the formula for estimating vulnerability as follows:

$$\text{Vulnerability} = \frac{\text{Hazard}}{\text{Coping strategies}}$$

According to Ardestani, Fisher, and Balzter, (n.d.), the vulnerability of a place or citizens can be determined in the following areas:

1. Physical vulnerability focuses on the nature of the bio-physical hazard;
2. Social aspects of vulnerability characterize the population at risk, their coping capacity, and resilience to hazard; and
3. Place-based methods are a third group which combine the social and physical approaches.

Similarly, Khan and Khan (2008:46) stated that:

Socio-economic Vulnerability the degree to which a population is affected by a hazard will not merely lie in the physical components of vulnerability but also on the socioeconomic conditions. The socio- economic conditions of the people also determine the intensity of the impact. For example, people who are poor and living in the sea coast don't have the money to construct strong concrete houses. They are generally at risk and lose their shelters whenever there is strong wind or cyclone. Because of their poverty they too are not able to rebuild their houses.

Furthermore, Jonkman and Kelman (2005:80) stated that:

Vulnerabilities of an individual potentially leading to death in a natural disaster like flood include age, gender, mental and physical health history, current mental and physical condition, activity and behaviour (such as attempting a rescue, sleeping or evacuating), clothing worn, swimming ability and experience (likely only to be relevant for non-moving water), temporary impairment (for instance, because of alcohol or drugs), understanding of the area where the flood is occurring, situation/place (for example, on foot, on a bicycle, in a vehicle or in a building), and rescue (including self-rescue) and medical response capabilities. The extent of vulnerability of the residents of a place whether rural or urban is therefore known by the following factors: poverty, insufficient infrastructure, population, access to economic resources, technology (Olorunfemi & Raheem, 2013). Henderson (2004) stated that the level of vulnerability in urban areas of rising countries is due to socio-economic stress, aging and inadequate physical infrastructure. Reyes (2010) went further to posit that vulnerability to any hazard including flooding is known by the following indicators:

1. Exposure indicators such as magnitude, frequency, duration, spatial extent, and seasonality of a hazard.
2. Sensitivity indicators which include economic condition
3. Adaptive capacity indicators such as access to social network and community relations

There are different factors that have been considered by scholars as determinants for the level of vulnerability of an area to flooding. The socio-economic variables highlighted are usually in low supply in rural areas. Pradhan, Baumgarten, Langenberg, Handwerker, Gilpin, Magyari, Hochberg, and Berman (2007) stated that the economic status of families can determine how exposed they are to flooding. Other factors like level of governance in the location, health, education, population and income level are also stated there (Brooks, Adger & Kelly, 2005; Toya & Skidmore, 2007). The stage of socio-economic growth in the rural places is very low. Similarly, access to employment, education, governance impact, technology is more favorable to them in the urban places than the rural. It is therefore easier for residents in urban areas to properly manage and control flooding in their locality than the people living in the rural places. Vulnerability of flooding in rural places can therefore be said to be higher in rural places than in the urban areas gave rise to the effect of these factors.

Coping Strategies of Flood Victims in Urban and Rural Areas

There are debates among various experts that flooding may be grouped as natural disaster but is however caused by wrong human practices (Science Daily, 2013). This means human factor contributes largely to the issues of flooding in surroundings. This means with proper care and planning, issues of flooding is an environmental disaster that that can be properly managed if not avoided. There are various ways that have been recommended by flood management experts in the administration of flood disaster. When these strategies are well handed, they are believed to go far to reduce the issues of flood disaster to minimum. The strategies suggested for the management of flood disaster includes but is not only the following:

Early Warning: is among the main causes of the 2012 flooding in Nigeria because the various stakeholders ignored the warning given by the Nigerian Meteorological Agency (NIMET) and where therefore caught unprepared (Social Action, 2012). Early warning has been well-known as one most effective measure of dealing with flood disaster (Practical Action, 2014). This is

because the warning given to residents will either help them to relocate in time or assemble necessary disaster management resources to cut the end product of flooding on them.

Creation of Hard Wood Forest: Deforestation has been branded as one of the main factors that empowers flooding. This way the planting of grass and forests can help to limit the brunt of flooding. The planting of forest plants will help to cut the effect of flooding through the ruin of properties and lives. The forest trees will also help to provide cover from excessive rainfall and cut the current of the flowing water either from the sky or any water body.

Flood Insurance: Flood insurance is a cover provided for victims of accident just like any other accident victim. Tomaszewicz (2003) stated that flood insurance is a key policy that when used well can manage the issues of flooding when the need arises. It then means that when the issue of damages comes up it will be properly covered by an insurance policy. Flood indemnity is a useful flood recovery strategy for areas that practice regular flooding. The damages which can arise can be properly insured with an insurance company in case of any flood disaster.

Construction Codes and Ethics: The call for proper legislation in the erection of buildings, sewage, drainage and other infrastructure in areas that are flood prone cannot be over-emphasized, few of these codes and ethics include; requirement of suitable anchorage to prevent flotation of buildings during floods, establishing minimum protection elevations for the first floors of structures, need for electrical outlets and mechanical equipment to be above regulatory flood levels or be appropriately (flood proofed), restricting use of materials that deteriorate when wetted and need for an adequate structural design, one that can safe and sound withstand the effects of water force and flood velocities.

The construction of infrastructure and administration of the communal environment can be done with proper approval and should comply with specification. Routine check should also be accepted by environmental monitoring groups and agencies to see that debris, buildings, refuse and plantations does not cover or obstruct the water ways. Keith (2008) identified the use of the 4 R's as a useful tool in the supervision of flood disaster. These 4 R's are:

Reduction: This means that the possible flood victims are able to take appropriate steps that will help them to cut the effect and cost of flooding on their environment.

Readiness: The people leaving in the flood prone places and necessary disaster management bodies should be prepared at all time to attend to flood cases. There should be adequate plan on ground to tackle any kind of flooding that may occur whether it comes with notice or not.

Response: If there are the issues of an existing flood situation, relevant organizations and agencies should be ready to act in response immediately in addressing the predicament of flooding being faced by the victims no matter the magnitude.

Recovery: Measures should be put in place to support victims to recover and return to their normal life within the shortest of time. Any delay in arranging the place recovery measures for the victims will create more disaster for the people.

Reservoirs: Chou and Wu (2013) stated that the organization of improved reservoir system has been introduced to control the increasing flood cases in the nation.

Other Strategies for Managing the Socio-Psychological Effects of Flooding

There are diverse strategies that are used to cut the socio-psychological effects of flooding on victims of flood disaster. These strategies can be enforced by individuals, families, groups, communities, organizations and even the entire nation. The essence is to see how the impact of flooding can be reduced on its victims before, during and after its occurrences. Few of the coping

mechanisms used to handle the socio-psychological challenges of flood disaster on victims include:

Community Group Assistance: MacMillan and Chevis (1986) in Shaw (2006:3) described community as “a feeling that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that individuals’ wishes to be met through their commitment to be together”. It can also be used to refer to a collection of people who share similar ideology and use the same for the benefits of the group. Community action, intervention or activities is one of the basic strategies that are used for handling with the problems of flood disaster on victims. According to Shaw (2006:3) “community-based activities (and community-based organizations) are deeply rooted in the society and culture of an area, they enable people to express their real needs and priorities, allowing problems to be defined correctly and responsive measures to be designed and implemented. When victims of flood disaster are confronted with socio-psychological needs in the event of a disaster, community assistance serves as a strong tool for handling such challenge. The kind of flood that affects some localities is such that has a devastating effect on the entire community. Few of the communities have therefore resorted to harmonizing their effort and resources together to provide relief for flood disaster victims within their locality. The measures of assisting flood victims range from providing financial assistance, showing love and also contributing their physical effort to assist the victims in rebuilding damaged infrastructures or facilities. Community effort has since then been a major strategy which some communities have developed to handle with the problems of flood disaster. The challenge encountered whether social, psychological, economical or cultural are easily dealt with through the process of communal assistance. National Flood Risk Advisory Group (2008:22) stated that “structural measures, and in few cases land use planning controls, require establishing a standard outside which they no longer make available protection and this is usually linked to the rate of flooding. The standard is ideally established in consultation with the community”. Since the members of the community understand the needs of one another, they are in a better position to provide immediate assistance when the need arises. Shaw (2006:4) pointed out that The community therefore has a lot to lose if they do not address their own vulnerability. On the other hand, they have the most to gain if they can reduce the impact of disasters on their community. The concept of putting the communities at the forefront gave rise to the idea of community-based disaster management (CBDM). At the heart of the CBDM is the principle of participation. Through the CBDM, the people’s capacity to respond to emergencies is increased by providing them more access and control over resources and basic social services. Using a community-based approach to managing disasters certainly has its advantages. The kind of assistance that is provided by community members no doubt are the mainly reason as it helps to address the immediate needs of the victims. When the entire community takes a conscious effort to pull resources together to answer the problems of their members, it can go a long way in addressing socio-psychological needs of flood victims within the locality.

Creation of Public Awareness: National Flood Risk Advisory Group (2008:22) revealed that “flood awareness and readiness aims to see that citizens in the villages clearly understand their risks of flooding, willing and able to listen to emergency services and are set for the actions they may need to take in the guide up to a flood event”. Public awareness is a veritable instrument used in curtailing flooding. It helps to limit the social and psychological effect of flood disaster on victims before, during and after the occurrence of a flood. Flood disaster management organizations such as the National Emergency Management Agency (NEMA) and State

Emergency Management Agencies (SEMA) usually utilize the mass media to enlighten victims of flood disaster on ways of assessing relief after a flood disaster and also how to overcome the different problems encountered during and after a flood disaster. However, there is need for placing more emphasis on this tool as a means of reducing the effects of flooding on victims. These organizations sometimes enlighten dwellers in flood level places on how to handle the rate of flooding in case of an emergency so as to reduce the socio-psychological effect of this natural disaster. They however need to create more public awareness in order to reduce the challenges of flooding experienced by victims. Chagutah (2009:123) stated that “mechanisms of communicating and raising public awareness on the gravity of risk and the appropriate risk reduction options remain weak”. Nabegu (2014) also contributed by pointing out that one of the crucial measures of overcoming the challenge of flood disaster by experts is the making of public awareness programmes. This implies that attempt needs to be intensified by individuals and organizations to make this a veritable tool in handling with the socio-psychological special effects of flood disaster. Effective public awareness activities help to enhance the knowledge among communities of the risks they face in the case of a flood and what risk-minimizing actions they can take (Chagutah, 2009). This medium in the past was used in most countries of the world to help victims cope with the challenges of flooding. They are also educated on how they can prevail over their challenges in the event of a flood.

Counseling Services: as one of the main challenges suffered by flood disaster victims is that they are psychologically affected by the rate of flooding which may affect their means of livelihood, destroy properties or affect their comfort ability. Counseling has been one of the major intervention ideas that have been recommended for the victims of flood disaster (Roberts, 2000). According to Abbasi and Shaukat (2012:1248) “counseling in psychological problems is one of the important psychological supports to the flood-affected people”. This may be that the victims of flood disaster require adequate encouragement in sort to be able to handle with their predicament. There are diverse psychological challenges that arise because of flooding and the ability to deal with these challenges strongly depends on the availability and provision of counseling services. This will help to cut if not totally eradicate the psychological trauma being experienced by the victims of flooding. Abbasi and Shaukat (2012:1248) noted that “about 38 percent of the study respondents were satisfied that psychological counseling services created a spirit of self-encouragement and this includes about eight percent of those who were satisfied to the extent of great extent on this account. This means that with the right use of counseling, victims of flood disaster can be assisted to recover their socio-psychological balance just as they were before the occurrence of the flood. Herman (1997) in Baggerly and Exum (2008:85-86) recommends a three-phase trauma recovery approach for handling with the effects of flood disaster. They are; establishing safety, retelling the trauma story and reconnecting with others among other factors.

Psychiatric Diagnosis: Psychiatric diagnosis is usually provided for individuals who are mentally and emotionally affected by flooding. When a flood occurs, some victims are usually traumatized and are required to undergo psychiatric diagnosis in order to avoid their condition from degenerating to a case of emotional or mental disorder. Psychiatric diagnosis is provided as a means of overcoming the shock and trauma that are encountered because flooding. Ugwu and Ugwu (2013:1038) stated that “the application of CBT in the treatment of adults and children with PTSD could come in three different but related techniques, namely; exposure therapy,

stress-inoculation training, and cognitive processing therapy. Ugwu and Ugwu (2013:1039-1040) suggested furthermore that the social and psychological effects of flood disaster on flood victims can be better managed through one or more of the following strategies:

1. Mass education on flood-prevention
2. Early Warnings
3. Provide emergency agencies with up-to-date equipment
4. Government should establish mobile clinics
5. Establishment of Psychological Service centres
6. More receiver dams should be constructed by the government

Way Forward

Flooding has diverse social, economic and psychological effect on its victims both in urban and rural areas. Overcoming these effects is therefore a collective responsibility both before and after any flood. This will require adequate sensitization, construction of flood resistance infrastructures, clearing and cleaning of water-ways among other factors in both urban and rural area.

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