BUILDING HEALTH RESILIENCE BY HARNESSING COMMUNITY VOICES IN THE PURSUIT OF WELLNESS

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Abstract
In the Niger Delta region of Nigeria, Bayelsa State ones in a while may be overwhelmed by a rampaging flood disaster that engulfs the whole state, thereby bringing to fore the challenge of building health resilience. One way of building community health resilience is by listening to community voices. What are the indigenous people saying about their environment which is necessary in incorporating into the policy making and decision taking both downstream and upstream approaches that are needed in ameliorating the health effect of natural disaster? Dominant political-economic systems means natural resources in the Niger Delta basin are being exhausted beyond the capacity of mother nature. Resorting to indigenous knowledge to complement non-traditional methods to sustain human and environmental wellbeing is needed at this time. There must be an increasing awareness of family as building block of community health as they are the most important unit in terms of being: carrier of culture; first house of learning; of health and wellbeing, of material and spiritual prosperity. Community is a cluster of families built on past wisdom, enhanced by present, inspired by hope for better future, hence the community voices should be listened to if community wellness is to be promoted.

Key words: *Bayelsa State, Community Voices, Resilience, Climate change, Mother nature*

Introduction
Resilience is defined as the ability to respond and reorganise in ways that maintain essential function, identity, and structure, while also maintaining the capacity for adaptation, learning and transformation (DeMello *et al* 2020). Community resilience should be an aim of health policies, building and strengthening resilience of communities. The importance of community resilience, the quality of social networks, and strengthened participation in decision-making for health and well-being is increasingly recognized (WHO Europe, 2012).

The theoretical framework of this study is built on the question of: can community resilience be strengthened? The answer is yes. Breton (2022) speaking in a webinar discussion organized by UNESCO Chair Global Health and Education on the 29th of June 2022 on community resilience outlined four pillars necessary in the strengthening of community resilience, which are: 1: Social connectedness - connections generated through the mobilization of local stakeholders by listening to them. According to Holt-Lunstad (2022) social

connectedness is a sense of belonging to a group, family, or community. It is about the relationships people have with each other and their engagement with the broader community which helps to build resilience.

Pillar 2: The provision of knowledge and skill-building Services - need to feed the local networks with knowledge (shared lexicon, shared norms, and shared perspectives); Jerome (2005) asserted that a knowledge society is a society that is nurtured by its diversity and its capacities. The concept of knowledge societies encompasses much broader social, ethical and political dimensions.

Pillar 3: The application of innovative and strategic communication Tools - how to maintain connections? Communication tools that are: widely used, and multi-purpose; according to Jerome (2005) the importance of education and critical thinking underscores that, in building real knowledge societies, the new prospects held out by the internet and multimedia tools must not cause us to lose interest in traditional knowledge sources such as the press, radio, television and, above all, the school. Pillar 4: The Prioritization of stakeholder community partnerships– natural disasters have demonstrated that without sufficient support local mobilizations may struggle to contribute in the face of a crisis (resources to manage the partnership).

Climate change leading to natural disasters like flood is getting worse. The 2022 rampaging of flood in Nigeria is a typical example. Bayelsa State, being worse hit of the flood, is as result of Bayelsa State location, which is at the lower Niger Delta basin of the nation (Oprah, 2022). The impact of any flood in the upper course of the river is amplified when it gets to the lower course hence the flood water from the North passes through the South (Bayelsa State) to the Atlantic Ocean which explains the severity of flooding of the State, where over 90% of the State was under water (Arise News, 19th September, 2022).

While Nigeria regularly experiences seasonal flooding, the floods of 2022 have been the worst since the 2012 Nigerian floods (Maclean, 2022). Flooding began in early summer (BBC, 16th October 2022) and has affected 33 of Nigeria's 36 states (Al Jazeera 17th October, 2022).According to Al Jazeera news of 17th October (2022) over two million people have been affected by the flooding. As of October, over 600 people have been killed and over 2,400 have been injured, the flooding has also destroyed an estimated 110,000 hectares of agricultural land (Maclean, 2022). By August there had been 372 deaths (Ogune 2022). A cholera outbreak in northeast Nigeria was attributed to the contamination of water sources by flooding and has been responsible for the deaths of at least 64 people (Davies, 2022). The flooding is expected to continue through November for the southern states of Anambra, Delta, Rivers, Cross River and Bayelsa (BBC 16thOctober 2022). Three of Nigeria's reservoirs, Kainji, Jebba, and Shiroro, are expected to overflow (Akbarzai, Smith & McCluskey, 2022).

The objective of this study was to find out from the people of Bayelsa State who were affected by the ravaging floor of 2022, what they think about the effect of the flood on their health (see Appendix A for the interview schedule which elicited responses of the effect of the 2022 flood on respondents' health) as well as educating them on water-borne diseases (see Appendix B which is explanation note on nine water borne diseases), coping strategies during the flood, and also how to deal with the aftermath of flooding. The research was carried out in two phases. Phase one was interview with participants on the effect of flooding on health while phase two was educating participants on how to stay healthy during and after the flood. The first phase of the research was aimed to harness the voices of the people which help to built resilience in the face of a natural disaster while the second phase of the research was to inculcate health knowledge for the pursuit of wellness.

Methodology

A hermeneutical phenomenological qualitative research design was adopted for the study. Hermeneutics is the theory and practice of interpretation (Van Manen, 1994). It involves interpreting the text of interviews to isolate common themes, thereby gaining understanding and meaning of the phenomenon. Furthermore, hermeneutic phenomenological is a process and method of bringing out and making manifest what is normally hidden in human experience (Hellman, 2016) Through analyzing the texts of interviews, the researcher can uncover common themes as shared by the participants to gain new knowledge about living through a particular phenomenon or life experience. This design was adopted because it gives deeper and clearer explanation when little is known about the phenomenon of interest by relying both on interpretation and description of the lived experience (Hellman, 2016).

The study is a descriptive (phenomenological) methodology because it wants to be attentive to how things appear, it wants to let things speak for themselves; it is also an interpretive (hermeneutic) methodology because it claims that there are no such things as un-interpreted phenomena (Hellman, 2016). Interpretation of the text occurs in a circle, the hermeneutic circle. The researcher uses the hermeneutic circle to gain understanding of the phenomenon. This process involves the 'researcher moving from parts of the experience, to the whole of the experience, and back and forth again and again to increase the depth and level of understanding from within the text' (Hellman, 2016). This method has been successfully applied in a similar study hence its utilization in this present study (Hoiseth & Keitsch, 2015).

The sample for the study was three Internally Displaced Persons (IDP) Camps out of the six IDP Camps set up by the Bayelsa State Government (BSG) in Yenagoa metropolis. The justification for the selection of three IDP Camps out of the six is that, for a sample finding to be generalized to a population, the

sample will have to be at least thirty percent of the population (Cohen Manion & Morrison, 2007). Three out of six is fifty percent of the total population which is higher than thirty percent that is a representative sample size to make for generalization of findings to the whole population (Cohen et al., 2007).

The exact number of persons in each of the camps could not be ascertained as anyone can just walk into the camp and occupy a space at any time. Purposive sampling was used to select participants for the study (Purposive sampling is a non-probability sampling techniques in which units are selected because they have characteristics that one needs in the sample, in other words, units are selected 'on purpose'). In this case the units are adults living in the IDP camps. The study interviewed and engaged 20 adults in each of the three IDP camps making a total of sixty participants. Creswell (2014) suggested that in qualitative research, participants are usually selected purposively when researcher has prior knowledge of the participants (in this case - Internally Displaced Persons).

Phase One of the Research

Phase one of the research tried to answer the question of 'what participants think are the effects of flood on their health'. This was done through interview with the participants using an interview schedule (questions on what they think about the effect of the flood on their health, see Appendix A) which was developed by the researcher.

Phase Two of the Research

Phase two of the research was on educating the participants on various coping strategies during the flood and precautions to take after the flood. Some coping strategies shared include:

1. Ensure you sleep under mosquito treated insecticide nets, especially children, it should be a must;
2. Boil your drinking water if possible to avoid water-borne diseases;
3. Manage your resources (money) efficiently by buying only what is needed;
4. Wear warm clothes as the weather is a bit cold;
5. Wear appropriate foot wear like rain boots when walking in flood water;
6. Food should be thoroughly cooked to avoid food-borne diseases as food; are prepared in large quantities in the camps;
7. Personal and environmental hygiene should be top notch.

Almost all Bayelsans are victims of the flood (Oguntola, 2022). They were pushed out of their homes and workplaces by the water for weeks; therefore

returning back after the flood recedes requires a lot of care. Below are some tips shared with the participants and excerpts from the interview conducted:
Thanks to God that the waters are fast receding. We must note that the abandoned spaces (homes and workplaces) must have been refuge for rodents and reptiles, displaced from their own homes by the same flood. Please take note of these key steps before re-entry of your apartments/offices/shops.

1. First entry should be done during the day when there is sufficient light and warmth -leave doors and windows wide open.
2. Do not enter quietly. You might have 'new occupants'. Announce your presence by banging on doors and stamping of feet. Make some noise. Let them know of your return.
3. The water took the lower parts of your house/compound, so these rodents/reptiles must have gone as far as your ceilings, wardrobes and inside furniture that were lifted, to take refuge. Use of insecticides or repellents (such as carbide) is highly encouraged. Throw these in the dark corners of your apartments also.
4. Unpacking of properties must be done carefully with extreme caution. Expect the unexpected. Handy sticks or Cutlasses should always be within reach. Also, keep your emergency exits free, if need be for you to run out. Confrontations should be your last option.
5. Do not use toilets and sinks immediately. Carefully wash and inspect them. Flush multiple times before use.
6. Fumigation of sewage pits, surrounding bushes and roofs is highly encouraged.
7. Do not pump water directly to your overhead tanks immediately. Disconnect your tanks and run the borehole for a while, inspecting the quality of water being pumped.
8. Do not use electrical appliances and switches immediately. Your switches must have been bridged / damaged. Have an electrical technician inspect them for you to be sure they are safe.
9. Do a joint walk around inspection in and out of your homes, to be sure walls, fences and other minor structures are still intact. Some might be waiting for a slight push to fall, which could cause injury or death.

We can't be careful enough but we can avoid some incidents. Let's all stay safe. I pray God gives us the strength, speed and resources to bounce back stronger.

Results and Discussion

Table 1: Presents the age categorization and gender of the sixty participants

Age Categorization			**Gender**			
			Female		**Male**	
Age	**No**	**%**	**No**	**%**	**No**	**%**
20 - 26	6	10	2	6.5	4	13.8
26 – 35	6	10	5	16.1	1	3.4
36 – 45	15	25	9	29.0	6	20.7
46 – 55	13	21.7	7	22.6	6	20.7
56 – 65	12	20	4	12.9	8	27.6
0ver 65	8	13-3	4	12.9	4	18.8
Total	60	100	31	100	29	100

Source: Field work 2022

From the above Table 1, 60 adults were interviewed in the study whose age categorization ranges between 20 and above 65 years of age, and 31 were female while 29 were male. The interview schedule contained questions that guide the interview process although the interviewer (who is the researcher) was at liberty to probe further depending on the response of the interviewee. All the interview responses were transcribed from the tape recorder used in the interview.

Some of the responses given as effect of flooding on participants' health included: frequent illness of malaria, diarrhea, nausea, vomiting, abdominal pains, fever, typhoid, and headache (excerpts from the transcribed interview responses have a lady lament that 'every day I dey sick malaria and typhoid'; whilst another male respondent decried that 'I always have constant headache since I came to this camp'). When probed further if they had prompt treatment, some indicated that they were treated immediately, while some indicated that treatment was delayed, and some said they did not have any treatment. Participants were asked some environmental risk factors of living in the IDP camp; the risk factors that were a common theme in almost all the transcribed responses are: stealing, environmental hygiene, coming in contact with pet animals, and problems of sewage disposal (in one of the respondent's words: 'we dey sleep for the same place with dogs and cats').

Question on food and feeding pattern was asked, participants were asked what they had yesterday for breakfast, lunch, and dinner and what time the meals were served? Participants complained of the quality of food as well as quantity of food served to them at the twice a day meal that was provided for them by the Government as well as well-spirited individual who donates food items to the camp from time to time (some of the responses were: 'na manage we dey manage the food wey dem dey give us';' the food no dey sweet' was a response from another interviewee).

The researcher walked round the camp to glean the hygienic condition of the camp which is nothing to write home about. If the hygienic conditions of the camp is not addressed it has the potential of affecting the health and psychology of the occupants. The interviewees were asked if they were receiving any emotional or psycho-social support from experts on how to cope with the situation they are going through? The response received was not encouraging at all, as all said they have not had anyone come to speak to them on how they are feeling about the situation and how they can handle it (the interviewees chorused their responses as: 'we never see anybody ooo since we come this camp'). Participants were also asked what they think could be responsible for the devastating flood of this year 2022. The responses gotten defers within a wide range: from climate change as a result of global warming (depletion of the ozone layer and CO_2 emissions by soot from local refining of crude – an activity that is rampant in the Niger Delta region) to the melting of the glacier in Antarctica, to the release of water from Cameroun dam, to the excessive exploration of the natural reserve (crude oil and gas flaring activities in the Niger Delta Region) which upsets Mother Nature, to the obstructing of natural waterways and channels by the building of houses on waterways and construction of roads without appropriate drainage systems in place.

Participants were finally asked if there is anything individuals, families and communities can do to avoid / avert this type of catastrophic flooding going forward. There must be an increasing awareness of the fact that individuals, families and communities are the custodian of indigenous knowledge of their environment, their voices on the environment and how to protect it as well as harmonious relationship with Mother Nature need to be listened to. What are the indigenous people saying about their environment which is necessary in incorporating into the policy making and decision taking both downstream and upstream approaches that are needed in ameliorating the health effect of natural disaster?

Undertone of indigenous knowledge is built on the reality that humanity is one with Mother Nature hence the need for strengths-based; empower family to address current challenges –whether Nature or colonisation –future-focused, family to decide its own pathway, holistic health and wellbeing –material and spiritual. Tu'itahi, Watson, Egan, Parkes & Hancock (2021) likened Indigenous knowledge to a house with four sides where each of the four dimensions influences and support each other. These four dimensions are: mental and emotional well-being, social well-being, physical well-being and spiritual well-being. Diverse knowledge systems can contribute to collective pool of knowledge. But we must work from both downstream (local) and upstream (global) to get healthy People, healthy Planet (Tu'itahi, *et al,* 2021). It is a question of 'our house is burning; we must work together or die together'. The 'parts must collaborate for the wellbeing of the whole'.

The world faces complex and interrelated crises. Building wellbeing communities, centers on indigenous knowledge and leadership (WHO, 2021). UN Secretary General Antonio Guterres asserted that 'our planet is broken, it looks to indigenous knowledge for leadership; making peace with nature is the defining task of the 21st century to avert climate cataclysm and restore our planet - this is an epic policy test, but ultimately this is a moral test' (Guterres, 2020).. Tu'itahi (2022) in a webinar lecture on planetary health, concluded with a statement of the challenge of planetary health promotion which is 'how do we improve the health of the population – especially the health of the most disadvantaged and vulnerable – while making peace with the Earth?'

There is the need to rise above the level where the problems are being created as there are no new outcomes from same old actions, but only problems. There is a clarion call to elevate consciousness from village and nation to planetary level. The planet is the collective whole entity. States are the autonomous parts. Human organs and systems collaborate for the wellbeing of the human being. Expand our understanding of wellbeing to include environmental and spiritual dimensions - include other knowledge systems and solutions.

Our global challenges are human constructs. Therefore, we can de-construct and re-construct them. Re-set and apply new values and principles based on scientific, spiritual and indigenous knowledge (reciprocity, unity in diversity, love and kindness, justice, collaboration and solidarity). No single state can solve the converging global challenges humanity is facing. We must work together. Tu'itahi (2022) advocated a shift toward a new paradigm: 'one world, one people, one health' which is a move beyond competition to a culture of cooperation and complementarity.

Conclusion

This flood disaster, which is said to be one of the worst in the history of Nigeria, left in its trail hundreds of people dead and millions displaced, and several buildings submerged with many saying its impact will be felt for a very long time. The flood was not just in Bayelsa State but in several states of Nigeria. The community voices on the impact of the flood which this paper has outlined need to be harnessed in the pursuit of a healthy society and community resilience. Our task as health promoters and educators is not to predict the future of health, but to imagine and then try to create the future for health that we wish to achieve - our preferable future for health. If our vision is one of health for all within the ecological limits of the Earth, then we have to ask how that is to be achieved. This study is therefore concluding that harnessing indigenous knowledge of the environment from community voices will help avert some of the devastatingconsequences of mother nature. With all that the flood has done in

Bayelsa State specifically as highlighted by the community voices in this write up and Nigeria as a whole, there is the need for the following among others:

1. Community health workforce in Bayelsa statecan co-lead and engage for a societal movement that is multi-sectorial and multi-level for a resilience and collective wellbeing as local communities and a global family and community.
2. Re-build human (political and socio-economic) systems and natural systems to be ethically, environmentally and economically sustainable in Bayelsa state.
3. The post-flood era is always associated with gastroenteritis resulting from food-borne and water-borne infections. Health educators in Bayelsa state should help to educate and sensitize those within their reach, the significance of personal and environmental hygiene. The chain of infection can be broken by upholding the basic principles of personal/ environmental hygiene.

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Appendix A: Interview Schedule

1. How long have you been in the IDP Camp?
2. Since you have been in the Camp, have you fallen ill? What type of illness? (duration and treatment)
3. What are the health challenges in the Camp?
4. What are the environmental risks factors living in the Camp?

5. How is the feeding in the Camping and source of water?
6. For instance, yesterday, what did you eat for breakfast, lunch, and dinner? At what time were the meals served?
7. What kind of psychological support are you receiving in the Camp?
8. Is the flood usually this high/big
9. What do you think made the flood this year to be worse?
10. Does the worse flood situation has to do with the environment not well taken care of?
11. Has it any relationship with climate change and global warming?
12. Is there anything individuals or families or communities can do to avoid this type of devastating flood in the future?

Appendix B: Lecture on Water-Borne Diseases - Nine Water-Borne Diseases Spread by Water Pollution

Contaminants could lead to several health conditions, resulting in diarrhea or even neurological disorders. The most vulnerable to water-borne diseases are young children, pregnant women, immune-compromised, and the elderly. Nine water-borne diseases are as follows:

1. Cholera: Caused by the bacterium Vibrio cholera, which is characterized by severe watery diarrhea, vomiting, and dehydration, although some may be asymptomatic? Transmission of the disease can occur through food or water contaminated by infected feces. The bacteria is most commonly found in contaminated municipal water and well water, undercooked fish, gathered from polluted water, and sometimes found in raw, unpeeled vegetables and fruits.

As stated above, symptoms can include mild to severe diarrhea, nausea, vomiting, and dehydration. If you develop severe dehydration, seek medical attention immediately.

A few factors that make your risk factor higher are; (1) living in unsanitary conditions, (2) household exposure when living with someone who has it, (3) eating raw and undercooked shellfish, (4) people with low levels of stomach acid, and (5) for some unknown reason, people with type O blood group are more susceptible.

2. Dysentery: this comes in two types: amoebic dysentery and bacillary dysentery. The former is caused by the parasite Entamoeba histolytica, while the bacteria Shigella cause the latter. People who have amoebic dysentery may not notice any symptoms, but bacillary dysentery could cause bloody diarrhea, fever, and vomiting.

3.Polio: Many countries are free of polio, but parts of Africa and Asia still record the disease. At its worst, polio causes paralysis and death. However, there are

different kinds of polio. People diagnosed with nonparalytic polio do not suffer from paralysis but report mild, flu-like symptoms. Paralytic polio can cause flu-like symptoms and more severe signs such as flaccid paralysis, a loss of reflexes, and severe muscle ache. Long after recovering from the disease, polio patients may suffer from post-polio syndrome, including fatigue and muscle wasting. The spread of poliovirus occurs through direct contact with an infected person's feces and contaminated food and water.

4. Arsenicosis: Also known as arsenic poisoning, arsenicosis is usually caused by groundwater contaminated by industrial plants. Ingesting water contaminated with arsenic over a long period can result in poisoning. The substance has no taste or odor, so people may not realize they were exposed until they encounter symptoms such as diarrhea, darkening skin, and vomiting.

5. Giardia: This water-borne disease most often originates in streams and ponds and is transmitted through the contaminated water. These microscopic parasites in the water, known as Giardia, cause an infection that can clear up in a few weeks. Some exposed can experience abdominal pain, diarrhea, cramps, bloating, nausea, and weight loss for years to follow.

6. Escherichia Coli (E.coli): The bacteria Escherichia Coli, otherwise referred to as E.coli, can be useful for our intestinal tract, however, it can be dangerous as well. Animal waste in the land where foods such as ground beef are processed and in the water sources can spread this disease. A person will experience the primary symptoms of a water-borne illness, which usually passes within a week. Young children and the elderly have a greater chance of developing symptoms that can be life-threatening. If diarrhea contains blood, a physician should be contacted.

7. Salmonella: Salmonella is a common bacterial water-borne disease that affects the intestinal tract. Infection typically occurs through water and food. Most people show no symptoms while others develop abdominal cramps, diarrhea, and fever within eight to seventy-two hours after infected and recover within a few days after. In some cases, diarrhea can cause dehydration, which need prompt medical attention. If the bacteria, otherwise known as salmonellosis, spreads beyond the intestines, it can become life-threatening.

8. Typhoid Fever and Paratyphoid Fever: Typhoid, caused by Salmonella typhi bacteria, is more evident in developing countries like Nigeria but is no less harmful in industrialized nations. Infection can result in diarrhea or constipation, headache, fever, and abdominal pain. The spread of the bacteria occurs most commonly through contaminated food or water and fecal-oral transmission.

9. Hepatitis A: Hepatitis A is one type of hepatitis that results from infection from the hepatitis A virus (HAV). It is transmitted to a person while ingesting liquid or food that has been contaminated with fecal matter that contains the virus. Hepatitis A is an acute type of hepatitis, which usually requires no medical treatment. Common symptoms may be abdominal pain, flu-like symptoms, dark stool, light-colored urine, loss of appetite, weight loss, and jaundice, which is the yellowing of skin or eyes.