

The role of social workers in developing adaptive capacities of flood-prone communities

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Abstract

Vulnerability to climate change risks is worsened by low adaptive capacity, leading to fatal impacts on man and the environment. This descriptive survey research investigated the awareness of social work services for improving adaptive capacity towards flood-disaster and to determine the level of importance attached to these services by residents of two flood-prone coastal communities. Following the social development approach, a researcher-developed questionnaire titled 'Social Work in the Face of Climate Change Questionnaire (SWFCCQ)' was utilized to elicit responses from 24 household heads in Umuikwuanam and Umudioranam in Anambra state, South-eastern Nigeria. This study adopted purposive sampling in selecting respondents for the study. Findings of this study show that occurring every year, flooding in these communities is due to sea-level rise, leading to homelessness, an increase in the spread of diseases, mortality by drowning and psychological issues. Although residents of Umuikwuanam and Umudioranam communities have a firm grasp of required social work services and indicate the services they regard as very important, they decried the absence of social workers in their communities. Since social work services would ultimately reduce individual and community vulnerability to flooding disaster risks, the absence of social workers in these vulnerable communities requires urgent reversal to upturn the vulnerability of the community.

Keywords: adaptive capacity, climate change, flood, social development, social work

Introduction

The impacts of climate change are now so glaring that no one can deny it. Cutting across man's entire environment, emphasis in the literature is on anthropogenic exacerbation of climate change. Specifically, the Intergovernmental Panel on Climate Change (IPCC) posits that CC threatens ecosystems, societies, cultures and economies worldwide (IPCC, 2013). Thus, climate change, which is the departure of weather conditions from familiar long-term statistical averages, has been described as one of the current serious global environmental challenges facing humanity (Sampson, 2018; Eze, 2020). Furthermore, climate change brings about a challenging physical environment and wreaks havoc, threatening lives, economy, culture and institutions of affected communities (Drolet & Sampson, 2017). Due to climatic changes,

natural events such as floods and droughts have been worsened, with their attendant impacts. More attention is given to flooding in this study.

Flooding is a natural phenomenon that occurs when surface water exceeds its natural bounds. Similarly, Olufemi et al. (2020) indicate that flood occurs when a usually-dry land is covered by a surface flow that is beyond normal confinements, due to abnormally high precipitation, storm surges from tropical storms, dam bursts, and rapid snow melts, caused or escalated by human activities. Furthermore, Ekpo and Agu (2014) aver that coastal areas in Nigeria experience sea-level rise, increased storm frequency and intensity and flooding among others, due to climate change. Flooding in coastal areas leads to displacement of its inhabitants, alteration of the entire environments with impacts on plants and animals, loss of human lives and their properties (Akukwe, Krhoda, & Oluoko-odingo, 2018). Since flooding may not easily be prevented, the worry is, therefore, on the capacity of coastal communities to withstand the impacts of flooding (that is their resilience to or vulnerability of flooding).

Literature evidence shows that the developing world is highly vulnerable to climate change impacts due to low adaptive capacity (Nzeadibe, Egbule & Chukwuone, 2011; Eze, Girma, Zenebe, & Zenebe, 2020; BNRCC, 2011). With the increased frequency and intensity of climatic events, vulnerability tends to worsen by further impoverishing coastal communities that are sustained by agriculture. Agu (2016) opines that Nigeria's vulnerability to climate change impacts is majorly due to the subsistence of a larger population on rain-fed agriculture, widespread poverty, recurring climatic events such as droughts and floods. Thus, reducing vulnerability can be achieved by increasing adaptive capacity.

Adaptive capacity refers to individuals' and/or communities' ability to adjust to changes. With regards to climate change, the National adaptation strategy and plan of action on climate change for Nigeria in a working document 'Building Nigeria's Response to Climate Change' (BNRCC) (2011) connects adaptive capacity to imbibing potential changes, seizing opportunities and/or coping with the consequences of climate change. The study of Madu (2016) clarifies that adaptive capacity is dependent on awareness, education, income and assets. We assert that awareness and education alone could increase the chances of improving the income and assets of people for heightened adaptive capacity and overall human welfare and wellbeing within man's social environment (Onuoha & Eze, 2016).

The observation of social workers, educators and social development practitioners leading to the proclamation of the International Federation of Social Workers, International Association of Schools of Social Work and

International Council on Social Welfare (2012) is worthy of note. Necessitated by people suffering from climate-change unsustainable environments, the Body affirmed their commitment to environmental sustainability, promotion of capacity building in responses to environmental challenges and disasters (flood inclusive); and the facilitation of education and practice which lead to social development outcomes. Although this call by the aforementioned associations was to be implemented up to the year 2016, it remains unclear if the benefits of such proclamations trickled to developing nations such as Nigeria.

Previous studies have unveiled the impact of flooding on Nigeria's attainment of the Sustainable Development Goals (SDGs); effects of flooding on food security in agrarian communities of southeastern Nigeria; coping strategies on flood-disaster induced food insecurity; impacts, health implication and management of flood disasters (Akukwe et al., 2018; Echendu, 2020; Mbah, Yanjoh, & Iorhembra, 2020; Olanrewaju, Chitakira, Olanrewaju, & Louw, 2008). Yet, the subject of the role of social workers in improving the adaptive capacity of flood-prone coastal communities is unattended, creating a crucial gap in social development-oriented social work education and services in the face of contemporary climate change. This gap is expected to be filled, in part, by this study.

The theoretical foundation of this study is rooted in the social development approach. The scope of social development extends beyond social welfare to include economic wellbeing. Drolet and Sampson (2017) portray the social development approach as effective in addressing the social and economic needs of individuals, families, and communities vulnerable to climate change risks. The firm argument by the aforementioned researcher is hinged on the synergy of activities, processes, and institutions that unite to improve individual and communal capacities in the era of climate change. Being a people-oriented approach, social work ought to prioritize human and social capacity and assets' building for improvement of people's lives despite the risk of climate change impacts (Midgley, 1995; Cox, Pawar & Pawar, 2006; Elliot, 2012). It is against this backdrop that this study undertakes an enquiry into the community-perceived views on (priority) social work services required for improving adaptive capacities towards flood disasters by two flood-prone coastal communities in Anambra state, south-eastern Nigeria.

The first step towards improving a communities' adaptive capacity is assessing its presence in the community (Lim, 2020). Such assessments of adaptive capacity in the context of this could include the determination of individuals' and communities' well-being before and after a flood disaster, and their vulnerability to flooding disasters. Furthermore, the role of formal and informal education in improving awareness and strengthening resilience to climate change impacts and risks has been clarified (Enemaduku & Eleojo, 2013;

Nwosu & Ofili, 2016; Onuoha, et al. 2021). Thus, social workers ought to educate people about adaptation, adjustments and transformations following flood disasters, and communicate warnings on impending flood disasters early enough, as a way of improving their capacity to adapt to the increasing frequency of flood disasters.

The specific roles of Social workers in disasters have been presented in earlier literature. Javadian (2007) lists rescue, resettlement and reconstruction as the phases of such roles. Hence, it implies for our study's context that after a flood disaster social workers ought to appraise disaster-related shocks, losses and stress; promptly facilitate distribution of humanitarian aids during the occurrence of a disaster; support communal economic and financial recovery from flood disasters, and provide post-disaster counselling community members. Furthermore, social workers could initiate programmes and interventions to increase resilience to flood disasters; engage in networking with the government agencies to support communities during flood disasters and widely publicise publicizing disaster risk reduction plans to reduce vulnerability to flooding, facilitate the development and improvement of the quality of life of residents in vulnerable flood-prone coastal communities (Yueh, 2003).

Therefore, this study aims to firstly, ascertain the awareness of social work services for improving adaptive capacity towards flood-disaster; and to determine the level of importance attached to these services by residents in two flood-prone coastal communities in Anambra state, south-eastern Nigeria. Thus, the questions 'what social work services are required by flood-prone coastal communities for improving adaptive capacity towards flood-disaster, and how important are they?' would be answered by this study. Findings of this study are expected to position Nigeria to align with the proclamation of the International Federation of Social Workers, International Association of Schools of Social Work and International Council on Social Welfare (2012), which promised capacity building for social development-oriented social work education and practice in responding to environmental challenges and disasters such as flooding.

Methods and Materials

Design and area of the study

The design of the study is a descriptive survey research design. The descriptive survey research design is concerned with describing subjects' characteristics regarding pre-specified variables (Kothari, 2004). This design is fit for this study since none of the variables under investigation was controlled or manipulated, but the description of the state of affairs in the area under study as regards social work services for improved adaptive capacity towards flood disasters.

Umuikwuanam and Umudioranam communities of Anambra West Local Government Area in Anambra State, south-eastern Nigeria make up the area of this study. These two communities are highly vulnerable to flood, which occurs almost every year, due to their location, hence the researchers' choice of them as being ideal for this study.

Sample and sampling techniques

A total of 24 household heads (13 from Umuikwuanam and 11 from Umudioraanam communities), comprising 12 males and 12 females, serve as the sample for this study. The respondents serve as key informants in providing pertinent data for this study. They were purposively selected to participate in this study, being of families affected during previous flood disasters in the communities. Some household heads were neither willing nor disposed to discuss the subject of flooding due to the recurring losses with minimal previous support. The use of purposive sampling, therefore, limits the global generalisation of our findings without pertinent enquiry.

Data collection: instrument, techniques and analyses

A self-developed instrument named 'Social Work in the Face of Climate Change Questionnaire (SWFCCQ)' was adopted as the instrument for data collection in this study. The items of the questionnaire are drawn from the literature specifying the strategic and unique roles of social workers in disasters (Javadian, 2007; Yueh, 2003). The SWFCCQ has three parts, which elicits preliminary information, awareness of social work services and rating of the importance of these services respectively. While the preliminary information part presents a check-styled question format; the other two sections adopt a four-point scale ranging from Strongly Agree (SA = 4) to Strongly Disagree (SD = 1); Very Important (VI = 4) to Not Important (NI = 1). Similarly, the level of importance in terms of desired priority of social work services was determined and assigned by mean scores as follows: Not Important (Mean= 1.0-1.49), Less Importance (Mean = 1.5-2.49), Important (M = 2.5-3.49), Very Important (Mean = 3.5-4.00).

The 14-item questionnaire was read out to each respondent and their responses were noted by the lead author. This was to ensure that the respondents had clarity of the contents and to eliminate the need for a translator. Using frequencies and mean responses, the researchers present findings in subsequent sections. In the determination of an existing feature in the state of affairs of social work roles for improved adaptive capacity of the studied communities, the researchers assign 'Agree' to an item with a mean of 2.50 and above while 'Disagree' is assigned to items with a mean score of 2.49 and below.

Results

Preliminary information

The respondents in Umuikwuanam constitute 54.2% of the sample while Umudioraanam makes up for 45.8% of the total respondents of this study, with a 50-50% gender spread to each of the genders (male and female respondents). In describing the frequency of flood, 95.8% of the respondents agree that flooding occurs yearly in the communities studied. Furthermore, 83.3% assert that sea-level rise is responsible for flooding; and that neither increased rainfall nor development on floodplains and riverbanks is. Also, in identifying consequences of flooding in the communities, homelessness (that is, displacement from residential areas); loss of farmland; increase in the spread of diseases; mortality by drowning; and psychological issues such as depression, anxiety and posttraumatic stress were common, with pockets of physical injuries.

Knowledge of Umuikwuanam and Umudioranam residents' knowledge of social work services for improving their adaptive capacity to flood-disaster

Respondents of this study in both communities agree in their responses on what social work services are required to improve their adaptive capacity to flooding (Table 1). Despite the seeming wide acceptance of these communities on social work services expected of social workers, most respondents could not affirm the presence of social workers in their communities to help them adapt to increased flooding due to climate change.

Table 1: Umuikwuanam and Umudioranam residents' knowledge of social work services for improved adaptive capacity to flooding

Social workers	Mean	Status
Measure well-being before and after a flood disaster	2.87	Agree
Assess our vulnerability to disasters	2.96	Agree
Estimate the resilience of our community and the coping capacities we possess	2.91	Agree
Educate us on how to adapt, adjust and transform in case of a disaster	3.30	Agree
Appraise disaster-related shocks, losses and stress	3.09	Agree
Note our reaction to and recovery from flood disasters	3.22	Agree
Have initiated programmes of interventions to increase resilience to flood disasters	3.39	Agree
Communicate early warnings on impending disaster to our community	3.22	Agree
Engage in networking with the government agencies to support us in the face of disasters	3.26	Agree
Have publicised a disaster risk reduction plan to reduce our vulnerability to flooding	3.00	Agree
Have facilitated development and improved our quality of life by their activities	3.09	Agree
Assist in the economic and financial recovery from floods	3.13	Agree
Promptly provide humanitarian aids during the occurrence of a disaster	3.26	Agree
Provide pre and post-disaster counselling to us	3.00	Agree
Cluster mean	3.12	

Source: Fieldwork

Importance level of social work services for flood adaptive capacity improvement by Umuikwuanam and Umudioranam

The same items in Table 1 were used to inquire into preferred social work services by members of the Umuikwuanam and Umudioranam communities. From the results presented in Table 2, respondents regard all listed social work services as important. However, they deemed as very important the initiation of programmes of interventions to increase resilience to flood disasters; facilitation of development and improved quality of life by social workers' activities; provision of assistance towards the economic and financial recovery

from floods and prompt provision of humanitarian aids during the occurrence of a disaster.

Table 2: Desired priority of social work services required in Umuikwuanam and Umudioranam

Social workers should:	Mean	Status
Measure communities' well-being before and after a flood disaster	3.13	Important
Assess communities' vulnerability to disasters	3.13	Important
estimate the resilience of communities and the Coping capacities they possess	3.00	Important
Educate communities on how to adapt, adjust and transform in case of a disaster	3.26	Important
Appraise disaster-related shocks, losses and stress	3.17	Important
Note community's reaction to and recovery from flood disasters	3.30	Important
Initiate programmes of interventions to increase resilience to flood disasters	3.57	Very Important
Communicate early warnings on impending disaster to communities	3.43	Important
Engage in networking with the government agencies to support communities in the face of disasters	3.35	Important
Publicise a disaster risk reduction plan to reduce vulnerability to flooding	3.30	Important
Facilitate development and improved quality of life by their activities	3.52	Very Important
Assist in the economic and financial recovery from floods	3.65	Very Important
Promptly provide humanitarian aids during the occurrence of a disaster	3.57	Very Important
Provide pre and post-disaster counselling to communities	3.22	Important
Cluster mean	3.33	

Source: Fieldwork

Discussion

Climate change poses huge challenges to the physical environment, with threats to human lives, economy, culture and institutions, according to Drolet and Sampson (2017), it requires commensurate actions to withstand its threats. Umuikwuanam and Umudioranam suffer yearly flooding with attendant social problems. This is consistent with previous findings by Ekpo and Agu (2014) that coastal areas in Nigeria experience sea-level rise, increased storm frequency and intensity and flooding, among others, due to climate change. The

impacts of flooding recorded in these communities such as displacement from residential areas; loss of farmland; increase in the spread of diseases and loss of lives by drowning is similar to the findings of Akukwe, Krhoda, and Oluokodingo (2018). Necessary commensurate actions are required to reduce the vulnerability of the populace in the study area and increase their adaptive capacity to flood disasters. This is because the higher the adaptive capacity of individuals and communities to climate change risks the lesser their vulnerability (Nzeadibe, et al., 2011).

There exists a general acceptance by the communities of the services of social work in the face of flood-disaster. Nonetheless, most respondents could not affirm the presence of social workers in their communities, which makes them vulnerable, as they are non-beneficiaries of the essential services provided by social workers in the prevention of flood disasters and the provision of post-disaster services. Unfortunately, the government, communities' and other stakeholders' approaches to tackling such yearly flooding in Nigeria are usually ad-hoc and poorly established. Obeta (2014) describes the government's approach to adaptive capacity improvement as non-inclusive and not well established. Thus, necessitating the prominent role of social work(ers) who could arise to bridge this gap. Hossain and Mothbor (2014) assert that social work education and practice should aim at the use of available scientific knowledge, skills, systematic and organised activities to provide vulnerable individuals and communities with the required support for satisfaction and wellbeing in this era of climate change. This implies that social workers are prepared to provide relevant services for the improvement of communities' adaptive capacity before and after flood disasters in the study area. The (re)training and deployment of social workers to vulnerable communities is, therefore, urgently required.

Following the principles of the social development approach, social workers should prioritize human and social capacity and assets building for the improvement of people's welfare despite the risk of climate change impacts (Midgley, 1995; Cox and Pawar, 2006; Elliot, 2012). Sampled residents of the study area identified listed items as social work services (Table 1). These items relate to community assessment before and after flooding disaster; education and sensitization; support for economic and financial recovery and improvement of the quality of life of residents. These are essential elements captured within the social development approach underpinning this study. In particular, Drolet and Sampson (2017) see the social development approach as effective in addressing the social and economic needs of individuals and communities vulnerable to climate change risks such as flooding. This means that when people's economic and social needs are addressed, their adaptive capacity to disasters will be significantly boosted.

Furthermore, four items related to economic development were deemed ‘very important’ by residents of Umuikwuanam and Umudioranam communities (Table 2). These items are found to be related to increased resilience; improved quality of life; economic and financial recovery; and provision of humanitarian aids. Previous studies have alluded to widespread poverty as the key factor of vulnerability (Nzeadibe, et al., 201; Eze, et al, 2020; Agu, 2016; Madu, 2016). In addition, Madu (2016) lists awareness, education, income and assets as factors of adaptive capacity. With these communities lacking diversified income aside from farming and fishing, with minimal assets due to poverty, the adaptive capacity becomes a mirage despite the volume of education and awareness of climate change or flood disaster risk they possess. This explains their preference for the items listed as very important, while accepting other items as ‘important’ social work services they want to see more in their communities.

Again, the preferred social work services as indicated by residents of the study area strengthens the social development approach. Social work must go beyond social welfare to include people’s economic well-being (Elliot, 2012). Hence, along with other stakeholders, social workers should prioritize human and social capacity and assets building for the improvement of people’s quality of life. This is because when poverty is replaced with income and assets, it counters susceptibility to disasters and makes resettlement, reconstruction and recovery easier, which entails improved adaptive capacity. This would be in line with the commitment of the International Federation of Social Workers, International Association of Schools of Social Work and International Council on Social Welfare (2012) to increase environmental sustainability, promotion of capacity building in responses to environmental challenges and disasters (flood inclusive); and the facilitation of social work education and practice which lead to social development outcomes.

Conclusion

This study investigated the awareness of social work services for improving adaptive capacity towards flood-disaster and to determine the level of importance attached to these services by residents of two flood-prone coastal communities (Umuikwuanam and Umudioranam) in Anambra state, South-eastern Nigeria. Residents recognised the listed pre-and post-flood disaster assessment, education and intervention services as social work-related. They consider initiation of interventions programmes, development, improved quality of life, prompt provision of humanitarian aids, support towards economic and financial recovery as very important services required to increase resilience and adaptive capacity to flood disasters. These services would ultimately reduce individual and community vulnerability to flood disaster risks, which will heighten in frequency and intensity due to climate change. Although residents have a firm grasp of required social work services, they are

uncertain about the presence of social workers in their communities. The absence of social workers in these vulnerable communities requires urgent reversal to upturn the vulnerability of the community. The indicated priority services in this study are a good starting point in the provision of social work services for the social, economic and overall wellbeing of these communities in line with the social development approach.

Limitations of the study

The design of this study would have yielded better results following the qualitative approach. However, the required logistics and other factors for successful qualitative data collection were lacking at the time. The separation of the items of the instrument into pre-and post-disaster social work services would have given more results for a robust discussion on the subject. Also, interviews of social work officers at the State and Local Government levels could have provided further information to improve our understanding of the topic. The aforementioned lapses could be incorporated in future studies to provide deeper insights unavailable from our study.

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