Coping and Resilience: Women Headed Households in Bangladesh Floods

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Abstract Literature is bountiful in relation to different theories and approaches that advocate for resiliency in individuals, families and communities. One widely acknowledged fact is that people build up resilience on the basis of their experience that they gain through their day-to-day hardship and struggles. For those who often live in fragile environments and vulnerability, there is the capacity for resilience to become a part of the culture of a community; becoming absorbed, entrenched and then bequeathed to each subsequent generation. This paper spotlights a group of women who live in an area of Bangladesh that is known for both its poverty and its regular tendency to flood, hereby regularly putting them, their families and their communities at risk of losing lives and/or their livelihoods. Through their narrations, the authors will demonstrate the human capacity to endure adversity, loss, vulnerability and destruction and still maintain the indomitable spirit of acceptance, hope and flourishing. Coping strategy is a central theme throughout. The authors provide accounts which outline the means by which these women practically and psychologically, prepare for and endure the regular and destructive nature of flooding. A brief discussion occurs in relation to the implication of some aspects of social work assistance in the context of women and floods. 'This is every year affair. As the affected 'we don't have to lose our dreams and hopes, we need to face it and move on for survival' (research participant).

Keywords Cultural and Generational Resilience, Adversity, Vulnerability, Hope, Endurance

Introduction

As the storm rampages In your crumbling hut The water rises to your bed Your tattered quilt Floats on the flood Your shelter is down

(Bhattacharya, 1969)

Coping and resilience are interrelated and interdependent. Resilience simply refers to the meaning of an individual's predisposition to cope with stress and adversity, while coping is generally described as an approach people employ to deal with a crisis successfully (Davis, 1996; Paul and Routray, 2010). Both the strategies are intertwined in the process of management of stress and adversity during the period of crises. Perennially alternating calamities do produce critical conditions but they also seem to offer communities with variable strengths to cope and adapt (Pulla, 2013, Reivich, and Shane. 2002).

The objectives of this study were to understand the coping and resilience of women headed households living in haor¹ areas in four districts of greater Sylhet, Bangladesh. Already facing the adversity of poverty, this paper describes the nature of their coping in floods, the nature of resilience, outlines the adoptions made for their future amidst helplessness, and gives credence to their enduring capacity to persevere, adapt and most importantly, maintain hope. The women whose narratives that we present here confirm that resilience depends on the capacity of individuals and families to deal with and adapt to their presenting environments alongside the reinforcement of strengths to cope with the stresses and adversity experienced during the period of crisis. The authors begin with a brief description of the geography and a glimpse into the way of life of these women, their families and communities.

'the company (by which they mean multinational companies) trawlers, don't leave a thing... they catch all fish... yet our men dare to go to the seas, rain, and storm, they never heed to weather warnings they go, go and hope every day to return' but that ill-fated day in 2009 he never returned'

Hafeeza talked about her husband and said that each

¹ Wetland ecosystem.

time he went away she prayed incessantly that he returns home that day and every day.

'My husband was old, older than I am, 15 years older to me. He was 61. Not necessarily the one who ought to be braving the sea. But if he did not go he always felt he will starve his family. (points to herself and three children). With the help of three daughters I continue to work through the paddy fields and if flooding occurs, leave to the city to work as a domestic servant. Bangladesh is blessed, abundantly blessed with water (Hafeeza, 45).

This paper is empirically based and has utilized qualitative methodologies in the form of in-depth interviews. The authors further provide an overview of resilient literature which allows readers to further understand and celebrate the indomitable resilience of these women and the communities they are connected to.

Methodology

A purposive sample of 25 affected households in four districts within the Sylhet region with similar socioeconomic backgrounds that live in the *haor* areas were included in the study. Households are located scattered, often on a high place made with additional soil to protect the homestead from flooding. Semi-structured interviewing method was used to collect required data from the respondents. The data collection was supervised by the second author and trained students of social work, economics and statistics of Shabjalal University of Science and Technology undertook research interviews. The narratives produced here have been assigned a pseudonym and the most vulnerable that experienced the suffering caused by perennial floods predominantly living in *haor* areas were enlisted into the study.

The Geography

Greater Sylhet district which includes Sylhet, Sunamgong, Moulvibazar and Habiganj is popularly known as *haor* (low lying) area that remains vulnerable to flooding during the time of monsoon. Floodwater submerges around 20.5% of the country (3.03 million hectares of land) each year and in some cases up to 70% of the country goes under floodwater (Chowdhury, 2000; Mirza, Warrick, Erickson and Kenny, 2001; Mirza, 2002). Over 5 million Bangladeshis live in areas highly vulnerable to cyclones and storm surges. The majority of those living in this area are low-income agricultural workers; 70 percent of whom are landless and relatively asset-poor (Alam, Naureen and Ahmed (2008). People live around these *haors* using cultivable land for a single crop of rice variety called *boro* during winter from January to April and from July to November. An

occupational change occurs as a result of this from agriculture to fishing (Kazal, Villinueva, Hossain and Das, 2010). They are farmers and fishermen too. Almost every year the people living in this region face flooding, and the entire area goes under water which usually make the people suffer for more or less six months as the flood water does not recede quickly.

There seems to be no solution to this perennial flood that occurs year after year. People of this region have accepted it as a reality and therefore have learnt to live with flooding which influences generation after generation as the younger generation internalizes the way of life of the older generation. Since flooding is an unavoidable phenomenon for those living in these localities; flood affected people adopt different strategies to minimize the ramifications. Our findings, like other studies, show that people do not respond to flooding by adopting all strategies rather they take different preventive and mitigative initiatives sequentially according to the necessity (Corbett, 1988; Paul and Routry, 2010).

'This is a permanent problem, we need to learn to live with it.' Who ever lost anything would not have lost first time. Our family lost livelihood several times in our life-this is a permanent problem; and it does not seem to have a solution of this problem. We live here-Hoar is where I was born and Hoar is where I will die. Hoar areas will always be severely affected as we lose everything (e.g. homestead, crops, livestock, poultry, etc.) because of flooding. This is every year affair. As the affected we don't have to lose our dreams and hopes, we need to face and hold a plastic sheet and move on for survival' (Sharnina, 57)

Conceptual Understanding

There are different theories and approaches that advocate for resiliency for the people confronting hazards and risks of many types. Resilience thus pushes the individuals to be able to interact with their environments and the very process helps promote their own wellbeing and protects them from overwhelming influence of multiple risk factors (Zautra, Hall and Murray, 2010). There are different levels of resilience that are gradually built up by individuals in the situations of crisis.

Campbell (2009) points out appropriate levels of resilience followed by those who have an ability to bounce back, but who have a limited ability to describe what they went through and how they did it- and those who describe their ability to bounce back and who learn from the setback- and those who describe what they have learnt and recover quicker from the setback and at reduced cost. Another level of resilience has been talked about which helps an individual transform an extreme challenge into an opportunity and helps achieve good

outcomes even in the face of loss-which has often been referred to as post-traumatic growth (Tedeschi and Calhoun, 2004 and 1995; Linley and Joseph, 2004). People build up resilience on the basis of their experience that they gain through their day-to-day hardship and struggling way of life. It is possible to develop, widen and deepen the process of resilience (Lewis, Donaldson-Feilder and Pangallo, 2011) for those who often live in vulnerability; and resilience can also be context-specific (Windle, 2011, (Pulla, Shatte and Warren, 2013, pp. 12-13). Resilience becomes a part of the culture of a community as it is absorbed and entrenched into the peoples' cognitive domain and transmitted from one generation to another. Zolli and Healy (2012, p. 14.) argue that resilience is rooted within "our beliefs and values, in our character, experiences, values and genes (and influenced by and influencing of) our *habits of mind-habits we can cultivate and change*". Resilience helps an individual, group and community recover from trauma and crisis, proves competence and achieves reasonable outcomes, whilst using these adversities for growth (p.15). Resilience may be better understood as an opportunity and capacity of individuals to navigate their way to psychological, social, cultural, and physical resources that pull together during the period of crisis. Crises generally create opportunities to capacitate individually and collectively to save and protect the life in case of adversity in an appropriate and culturally meaningful way (Pulla, 2013).

'Floods do take everything away but I suppose we wake up again and re-build. Even my three daughters seem to understand the reality... it is hard on them. But they help out quickly taking a few things out and we swim away to some school shelter' (Hafeeza, 47).

Coping Strategies

People adopt different strategies to cope up with the situation for survival. Some strategies are individualistic, undertaken by a particular family or a group of families. Clearly the poor who live in low lying areas do not consider flooding as a continuous threat for their survival; rather they treat the situation as quite normal and fight it hard. The term 'Coping' appears in their jargon as adaptation to adverse situations. Their actions during the time of flood designed and materialized on the basis of their network of relationships that bind them with their relatives and acquaintances living in and around nearby the city. Resilient people do not give up in difficult times, especially during and after natural disasters rather they try to reach out to others for support (Petsch, Koppel and Fruhauf, 2013).

'as poor we have no choice but to live close to rivers,

embankments and adjacent to government land just next to the embankment- for the poor these are the only spaces left---at least there are some days we can live without objection from authorities. We regularly face disasters with courage and we have nothing else I suppose. It is our patience that is often put to test but as women we do not only pull our children through but our neighbour's children too' (Hafeeza, 47).

Certainly there are those who succumb to or feel helpless in the face of crises and adversities as they give up while others fight back and move on. Coping, the women in our studies believe is a way to survive and therefore a way to resiliency. Clearly radical situations require human beings to reinvent and rise above their limitations. Pulla (2013) opines that stress, adversity and challenge are very much inevitable parts of today's daily jigsaw puzzle of life-which are often out of our control. But the perspective that is held about the stresses people confront is that can be brought under control through shifting our consciousness from one of 'helplessness' to one that allows a 'bounce back' in biological, psychological and social terms. Certainly such new conditioning relies on an understanding of possible risks and dangers that can disrupt successful adaptation and maintenance of functioning social life within changing circumstances and environments (Mitchell, 2013; Wu, Feder and Mathe, 2013). Carver and Connor-Smith (2010) have described coping responses as partly controlled by personality or habitual traits and partly by the social context or its impacts- particularly the nature of the stressful environment. Recovery from calamities therefore does not mean restoration of status quo rather it emphasises innovation of coping and creative strategies that ensures possible and preferred futures. In the face of natural disasters, individuals, families and communities confront the questions like 'what now and what next?'-while witnessing the destruction, damage or loss.

The kinds of strategies adopted by these communities during flood seasons may be described as sequential implementation of preventive and mitigative initiatives (Corbett, 1988). Several examples are outlined below –

Though most of the homesteads were raised high so that they could be protected from floodwater, still a flood of a big magnitude often destroys the homestead. The respondents shared that they always had raised their homestead before the monsoon started. Ali (54) from a village of Sylhet district told,

'Flood occurs every year here during rainy season. Titls land is low lying and when the rivers nearby overflow due to incessant raining, the entire village goes under water. If the magnitude of the flood is smaller and of short duration then some of the houses raised high before the monsoon may be saved. I raised my homestead every year before the

monsoon. Still I could not save my house in 2007 and 2009. Fortunately my house did not drown in the last two years as the height of the flood could not cross the forecourt of my house'

Another respondent Bashir (45) from the same village shared a different story,

I along with my 5 family members somehow survive as we stay on a *mancha'* (indigenous cot) made of bamboo, raised before monsoon. We stay on it as long as floodwater does not release. If the duration of flood prolongs then we go hungry and suffer from different diseases. We (my family members and myself) had to be rescued at least five times by the volunteers and NGO workers when our life was in danger as the floodwater entered into our only living room, damaged the *mancha*² and we were almost drowning. The NGO workers immediately took us away to a nearby primary school where other villagers were also rescued.

Like Bashir many of the respondents do the same, making high *mancha* with bamboo inside the living room and family members perch on it during floods along with their belongings despite the risks involved in it.

It is difficult to visit relatives and friends when this is an annual occurring, what we can do-we use mancha. We live near Haors that offer us six months of employment and six months of survival on what we can manage. We do look for alternative source of income and mostly involves ourselves in fishing. We have a piece of agricultural land where we grow rice and sometimes vegetables. That is how we earn a livelihood. I have a small family with 4 members. My husband remains unemployed for 4 to 6 months a year during the time of floods when our agricultural land keeps submerged with floodwater. But we cannot afford him to be unemployed for the survival of our family members and therefore he immediately involve in fishing. Fishing is profitable in the time of floods. We sell fish in town. One way we are not in serious economic crisis during flooding.

A substantial number of people migrate themselves to the nearby city to live with relatives or temporarily settle in a slum in the time of floods every year. There are a number of cases that of the flood affected that settle down in any unskilled low paid labour in the city. Sometimes temporarily displaced do petty businesses and when floodwater recedes, return to Haors. Some residents' plan and move away from the Haors and take preventive actions. Abeda (45) from the village of Sunamgong district explained the nature of migration of her family members as well as others living in the *haor* areas. She said:

Before flooding we leave home and take shelter in a

relative's house in Sunarnong city. My husband generally work as a day laborer in the city. My relative helps him get work, and he earns better, gets job every day and works hard. So, my family does not go hungry this time. After the floodwater recedes I along with my family members come back home. Like myself and my family members many of the families from the haor areas migrate prior to flooding.

Flooding causes people in the *haors* socioeconomic dislocation, and disrupts schooling of the children and destructs the source of income for earning members of the families. Many of the respondents shared that they reduced the number of meals a day, bought cheap food items like vegetables instead of fish and meat, had to sell personal belongings, and had borrowed money from relatives, friends and traditional money lenders in order to survive during the time of flooding each year. Some who are very poor survive through relief provided by NGOs in the time of flood. Rarniza (51) from a village under Moulvibazar district was sharing her struggle:

My family consists of 8 members. My husband and elder son are the only earning members in the family. We also do not have any land of our own and therefore both of them took lease land for sharecropping last year. But unfortunately the entire crop was destroyed due to flood and we suffered a huge loss. Our house was also completely destroyed and we had to take shelter to a school. We became penniless and had to survive on relief for quite a few days, supplied by the government. After passing a week in the school house we came to Moulvibazar city, took shelter in an acquaintance's house and had to borrow some money for survival. We then sold some of our personal belongings like golden necklace and mobile phone to collect some money for buying foods. My husband started working in a grocery shop as a helper, and my elder son involved himself in a construction firm. I also took up a job as maid servant. Two of my children had to stop going to the school. After around 9 months of our stay in the city we again came back home.

Selling land is a common practice in the village. Most of the time household head decides to sell land to meet up financial crisis, especially during post-flood situation. Land is generally sold to an outsider, who does not live in *haor* area. But selling land is the last resort adopted by a household head in order to ensure the survival of family members. Flooding always cause the death of livestock and poultry every year. Therefore, villagers often sell them, prior to flooding during the time of monsoon. It helps them handle the situation of financial crisis during flooding and also to face post-flood situation. Nasirna (50), a widow from a village under Habiganj district shared her experience,

I have 4 members in my family. My husband died 5

2 An indigenous cot that used bamboo andjute

years ago. I had to struggle a lot for ensuring the survival of my children. I could not send my children to the school because of economic hardship. Now, two of my sons work as agricultural laborers, earn money for the family. I myself raise livestock and poultry so that some additional money may be earned and that can help the family run smoothly. Livestock and poultry are sold before the monsoon starts as they die during the time of flood. Flooding in each year makes the poultry and livestock die enormously. I'm very much aware about it and therefore sell my livestock and poultry before flooding every year.

Flooding often causes shortage of food items, lack of drinking water and no dry space available for cooking. The people, who do not migrate to the city, stay back at home in the *haor* area during the time of floods and always face these difficulties. But the flood affected people remain ready to overcome this situation in advance. Nazreen (55) from the same village explained:

'We suffer most due to lack of pure drinking water in the time of floods. Both GOs and NGOs supply purified bottled water, and we sometimes go far away by boat to bring tube-well water located on a raised space'.

Other threats exist during flooding. Deaths, diseases and injuries occur from waterborne diseases, snake bites, drowning, slipping, large trees and structures falling on women, lack of medical facilities, malnutrition, lack of clean drinking water and proper sanitation facilities (Alam, Naureen and Ahmed, 2008). Those who suffer from diseases like cold, dysentery, diarrhoea, skin ailments etc. during flooding treat themselves with indigenous medicines for recovery. According to the participants, children are the worst sufferers of flooding. Schools are shut down and children are forced to stop their study at the time of flooding. In most cases, children are not encouraged to restart their study since the families struggle hard to survive in post-flood situation.

Women and adolescent girls also suffer as sanitation systems are destroyed. Many women reported that they refrain from using the toilet during the day and consequently suffer from urinary tract infections. Pregnant women, lactating mothers and women with varying disabilities suffered most, as they found it difficult to move before and after the cyclone hit (Alam, Naureen and Ahmed, 2008). Other preventive strategies the people of *haor* area implement is to place hard materials around the house, raise the ground of the house before flooding, and as mitigative initiatives they make high *mancha* and *pataton*, reduce the number of meals, buy cheap food stuffs, depend on relief, take shelter in a safer place along with personal belongings, search for alternative source of income, sell their assets, borrow money, mortgage and sell agricultural land for survival during flooding-which are also found in some other

studies (Paul and Routry, 2010; Rasid and Paul, 1987; Thompson and Tod, 1998).

Numerous efforts are taken by the suffering people to cope with the situation of flooding and also to reduce vulnerability in the face of long term consequences of flooding. It has also been shown in other studies that flood affected people never give up rather they rebuild and set out to start a new life (Belt, 2011; Haque and Zaman, 1993; Hutton and Haque, 2003; Ninno, Dorosh, Smith and Roy, 2001; Paul and Routray, 2010; Rashid, Langworthy and Aradhyula, 2006; Rayhan, 2008). The Bangladeshi people can teach the rest of the world about how to cope with the consequences of rising sea levels. They consider the present time as their future and adapt accordingly (Belt, 2011).

Resilience as a Philosophy

Undoubtedly, people living in the *haor* are resilient. They know they will have to face floods but never give up. Most people consider regular flooding natural and a part of their daily existence. Sufia (49) from a village of Sunamgong has a different view on floods:

Flood is not a curse but a blessing! Haor people lose everything due to flooding each year; still they come back and start living afresh in the haor areas. They can overcome all the odds because of blessing. Otherwise, tell me... why should they come back each time?

As soon as floodwater recedes we remake our houses. 'We never lose hope' Nazira (57) from a village of Moulvibazar said:

'We start a new life every year after the floods. Our house gets vanished due to flooding. All of our belongings are lost in the flood. We cannot challenge the nature. With the blessing of almighty, we again stand up, rebuild our house and live peacefully. We know Allah wants us to overcome the danger that way. We are bound to follow HIS directions! (His, here is addressing God almighty)' Nazira (57).

The following statements further highlight the thinking that shapes these communities coping which in turns strengthens their capacity for resilience:

- We know that we don't have an escape from it (floods).
- Floods are predictable during rainy season in *haors* so we take as much as preparatory actions as possible to face it prior to destructions and to lessen the destruction.
- Floods are predicable- destruction is not. Sometimes this makes us helpless. Untimely flood brings about untold miseries and sufferings for the villagers. Even stored food is washed away. Or even better

described through a poem of Rabindranath Tagore, translated by William Radice (2005).

'Clouds rumbling in the sky; teeming rain I sit on the river bank, sad and alone.

The sheaves lie gathered, harvest has ended, The river is swollen and fierce in its flow. As we cut the paddy it started to rain.

One small paddy-field, no one but me--

Flood-waters twisting and swirling everywhere' And yet we survive!!!

Social Work Implications

Environmental social work is increasingly becoming an important discourse in social work knowledge and practice these days (Pawar and Pulla, 2012; Pulla, 2014; Pulla, Jaffri and Rao, 1985). McKinnon (2008 and 2010) argues that, despite the existence of a theoretical framework of reference to ecological social work, the term 'ecological' has mostly referred to the socio-cultural environment and has largely ignored the natural world context in which social work practice takes place. When the questions of coping and resilience of the people come into being in the face of natural disaster like flooding in the *haor* area of greater Sylhet district of Bangladesh, then along with socioeconomic sustainability ecological issues and spirituality need to be taken into account (Gray, Coates and Hetherington, 2007; Haug, 2005). People's belief, their ecology and their spirituality may play a vital role in ensuring their coping potentials and resilience spirit while facing any adversities like flooding affecting the inhabitants of *haor* areas of Bangladesh. The practice of social work with flood victims before, during and after flooding could be successful in addressing their problems as well as helping them to cope with the situation and also make them resilient if eco-spiritual social work as a discourse of social work practice is appropriately applied. In eco-spiritual social work practice spirituality means "other" rather than "self" which brings peace and harmony among the people living in a community. Thus social work practice needs to have a paradigm shift to strengthen coping and resiliency strategies of the people facing perennial floods in a country like Bangladesh. Interventions of social work need to be designed to address personal stress and loss of family possessions along with consequences of climate change, public policy issues involved in it, and also community strength and community cohesiveness. Multidisciplinary approach to deal with the flood victims in Bangladesh may be required to be adopted to benefit the affected people.

Conclusion

Climate change across the globe is a reality now. The impact of rapid climate change has now been felt everywhere. Human beings are currently in the process of learning how to adapt to environmental changes. Bangladesh is situated on a unique geographic location on the earth, which has made it more vulnerable to natural disasters like floods, cyclone, storms and drought. The huge experience Bangladesh gathered to encounter different natural disasters can provide useful insights as many parts of the world are going to be affected in future. The people of Bangladesh have become quite resilient to natural disasters and they can cope with potentially devastating changes caused due to environmental hazards.

The narratives of the affected people have adequately proven that *haor* people have developed their own indigenous strategies to cope with the situation of perennial flood that inundates them every now and then. The suffering people have been found quite resilient to flooding, encountering it with courage and confidence. The perennial flood devastates in the *haor* area, but the people always fight back. They start a new life after flooding with a new hope and dream. They persist, never give up despite of all odds they face. They have frustration, helplessness, but still they know very firmly in their heart and mind that they will have to survive. It is the strength inherent with individuals, families, groups and organizations which aid their recovery and empowerment (Pulla, 2012, p. 1). They firmly stand up and go ahead with their new mission; the mission of survival.

REFERENCES

- Alam, K., Naureen, F. and Ahmed, W. (2008). Gender Human Security and Climate Change in Bangladesh. [ONLINE] Available at: <http://www.wedo.org/wp-content/uploads/bangladesh-cas1>-studypdf>. [Last Accessed 10/11/2014].
- Bhattacharya, D. (1969). *The Mirror of the Sky: Songs of the Bauls of Bengal* 1st ed. <http://www.unesco.org/culture/litrep/pop.php?lfn=ecord&reco769>: Allen and Unwin-Historical Collection: UNESCO Culture Sector.
- Belt, D. (2011). *The coming storm*. Retrieved from <http://ngm.nationalgeographic.com/print/2011/05/bangladesh/he-lt-text>.
- Campbell, J. (2009). *Resilience Personal and Organizational Life*, Times Work: Edinburgh.
- Carver, C.S. and Connor-Smith, J. (2010). Personality and coping. *Annual Review of Psychology*, 61, 679-704.
- Chowdhury, M. (2000). An assessment of flood forecasting in Bangladesh: The experience of the 1998 flood. *Natural Hazards*, 22(2): 139-163.
- Corbett, I. (1988). *Famine and household coping strategies*.

World Development, 16(9): 1099-1112.

Davis, S. (1996). *Adaptable Livelihoods*. Lo Paul and Routray, 2010ndun: Macmillan.

Fetsch, R.J., Koppel, E. and Fruhauf, C.A. (2013). Coping with natural disasters. Fact Sheet No. 10.257, Colorado State University: U.S. department of agriculture and Colorado counties cooperating.

Gray, M., Coates, J. and Hetherington, T. (2007). The indigenous voice in mainstream social work. *Families in Society*, 88(1): 55--06.

Haug, E. (2005). Critical reflection on the emerging discourse of international social work *International Social work*, 48(2): 126-135.

Hutton, D. and Haque, C.E. (2003). Patterns of coping and adaptation among erosion-induced displaces in Bangladesh: implications for hazard analysis and mitigation. *Nat Haz* 29(3): 387-403.

Kazal, M.M.H., Villinueva, C.C., Hossain, M.Z. and Das, T.K. (2010). Food Security strategies of the people living in *haor* areas: status and prospectus. The study was carried out and publication was done with the support of the National Food Policy Capacity Strengthening Programme (NFPCSP), Government of Bangladesh (GOB), USAID and European Commission (EC).

Lewis, R. Donaldson-Feilder, E. and Pangallo, A. (2011). *Developing Resilience*. Report commissioned by Affinity Health at Work and CIPD.

Linley, P.A. and Joseph, S. (2004). Positive Change Following Trauma and Adversity: A Review. *Journal of Traumatic Stress*, 17, 11-21.

McKinnon, J. (2010). Towards a new consciousness of 'environment' for the social work profession: perceptions of a sample of environmentally conscious social workers in Australia, pp. 65-182. Retrieved from http://researchoutput.csu.edu.au/R/-?func=dbin-jornp-full&&object_id=23128&local_base=GEN01-CSU01.

McKinnon, J. (2008). Exploring the nexus between social work and the environment Australian *Social Work*, 61(3): 256-268.

Mirza, Q.M.M. (2002). Global warming and changes in the probability of occurrence of floods in Bangladesh and implications. *Global Environmental Change*, 12(2): 127-138.

Mirza, Q.M.M., Warrick, R.A., Erickson, N.J. and Kenny, G.J. (2001). Are floods getting worse in the Ganges, Brahmaputra and Meghna Basins? *Environmental Hazards*, 3(2): 37-48.

Mitchell, R. (2013). Perspectives on coping and resilience - A critical essay. *International Journal of Social Work and human Services Practice*, 1(2): 126-128.

Ninno, C.D., Dorosh, P.A., Smilh, L.C. and Roy, D.K. (2001). The 1998 floods in Bangladesh: disaster impacts, household coping strategies, and response. *Research report 122*, IFPRI, Washington, DC.

Paul, S.K. and Routry, J.K. (2010). Flood proneness and coping strategies: the experiences of two villages in Bangladesh. *Disasters*, 34(2): 489-508.

Pawar, M. and Pulla, V. (2012). MedhaPatkar's environmental activism and professional social work in India: mass legitimacy

amidst myopic structures, Paper presented at the 4th ICSD-AP conference, *Envisioning new social development strategies beyond MDGs*, Yogyakarta, Indonesia, 27-30th June.

Pulla, V. (2014). Towards the greening of social work *practice International Journal of Innovation, Creativity and Change*, 1(3): 141-163.

Pulla, V. (2013). Coping and resilience: people's innovative solutions. *International Journal of Innovation, Creativity and Change*, 1(1).

Pulla, V., Jafri, S.A. and Rao, N. (Eds.) (1985). *Hyderabad: the state of art of physical environment: a citizens' report--1985*. Hyderabad: Centre for Environment Concerns.

Pulla, V., Shatte, A. and Warreo, S. (Eds.) (2013). *Perspectives on Coping and Resilience*, New Delhi: Authorpress Global Network.

Pulla, V. (2012). What are strengths based practices all about? In Pulla, V., Cheoweth, L., Fraocis, A. and Bakaj, S. (Eds.), *Papers in Strengths based practice*. New Delhi: Allied Publishers Pvt. Ltd.

Radice, W. (2007). *Selected Poems of Rabindranath Tagore* (Translated). 5th ed. England: Penguin Classics.

Rashid, D.A., Laogworthy, M. and Aradhyula, S. (2006). Livelihood shocks and coping strategies: an empirical study of Bangladesh households. *Selected papers prepared for presentation at the American. Agricultural & Economics Association Annual Meeting*. Loog Beach, California, July 23-26.

Rasid, H. and Paul, B.K. (1987). Flood problems in Bangladesh: is there an indigenous solution? *Environmental Management*, 11(2): 155-173.

Rayhao, M.I. (2008). Assessing household vulnerability and coping strategies to floods: A comparative study of flooded and non-flooded areas in Bangladesh, 2005. Cuvilliar Verlag, Goettingen.

Revich, K. and Shatte, A. (2002). *The Resilience Factor*. New York: Broadway Books.

Tedeschi, R.G. and Calhoun, L.G. (2004). *Posttraumatic Growth: Conceptual Foundation and Empirical Evidence*. Philadelphia, PA: Lawrence Erlbaum Associates.

Tedeschi, R.G. and Calhoun, L.G. (1995). *Trauma and Transformation: Growing in the Aftermath of Suffering*. Thousand Oaks, CA: Sage.

Thompson, P. and Tod, I. (1988). Mitigating flood losses in the active flood plains of Bangladesh *Disaster Prevention and Management*, 7(2): 113--123.

Windle G. (2011). *Reviews in Clinical Gerontology* May 2011 21; pp. 152-169.

Wu, G., Feder, A. and Mathe, A.A. (2013). Understanding resilience. *Frontiers in Behavioral Neuroscience*, 7, 1662--5153.

Zautra, A.J., Hall, J.S. and Murray, K.E. (2010). Resilience: a new definition of health for people and communities. In J.W. Reich, A. J. Zautra and J.S. Hall (Eds.), *Handbook of adult resilience* (pp. 3--34), New York: Guilford.

Zolli, A. and Healy, A.M. (2012). *Resilience: Why things bounce back*. New York: Free Press.