



Place-based psychosocial interventions in the aftermath of Hurricane Maria in Puerto Rico

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Abstract

Hurricane Maria impacted the island of Puerto Rico with winds exceeding 155 miles per hour. The heavy winds and floods and mud slides caused destruction to natural and built environment. The island was deprived of drinking water, electricity, communications, access to medical facilities or obtain life saving medication. The article discusses how place-based psychosocial support activities can serve as a conduit to re-establishing place, defines place based interventions, encourages critical thinking exercises and community led dialogues to address their needs, and suggests that the community members were ultimately the architects of their own recovery. It concludes that place-based interventions facilitate the recovery of the disaster affected people.

Introduction

The objective of this paper is to present (1) a history of Puerto Rico with respect to past hurricanes, (2) a literature review of place-based interventions, (3) a practical place-based psychosocial support strategy to assist affected communities in the recovery and re-establishment of place, and (4) a summary. The paper concludes that place-based interventions are nimble, cost-effective, community-owned, and bring communities together after a disaster.

Hurricane Maria has caused the inhabitants of Puerto Rico to lose their sense of place. Place can be described as a geographical, physical and psychological space of where a person belongs, the relation between persons and the natural and built environment, and the interaction overtime between both. Humans and nature share a common space. The bonds are so strong that if something happens within the space the perception of security, intimacy and well being have been violated, thus generating physical, and emotional response on the people.

Place based intervention include the affected people in defining what they need to feel better, participate in the planning of re-establishment of place, and become active actors in the re-making of place. While the process may be similar and fit into a cookie cutter

patterns, the internal dynamic of the process is different for every community. Thus place based interventions are most appropriate in settings such as the recovery of Puerto Rico after Hurricane Maria.

Background

Puerto Rico is a small island in the Caribbean, the lesser of the major Antilles. The island is approximately 100 miles long by 35 miles wide. Its topography consists of mountain ranges, beautiful valleys, and beaches. The south-western part of the island is arid. Politically, the island is a protectorate of the United States and its citizens have American citizenship. They are taxed, but have no representation in Congress.

The island is affected by moderate-to-severe storms on a yearly basis. The people who experience these crises have developed a hurricane response toolbox that helps repair homes and living environments so the population can move forward. In its history, it has experienced large hurricanes that have devastated the island, its natural beauty, and its people. Over the years, construction has made housing and infrastructure more resilient to these severe weather events.

Housing mostly consists of concrete with crossed-iron reinforcements on the walls. Most people in the inland towns and mountain regions own their own homes. The infrastructure in terms of water, electricity, and the road system on most of the island is poor to moderate. As a result, Puerto Ricans have learned to adjust, and, when necessary, have modified their lifestyle to meet the challenges of the climate.

Culture

Puerto Ricans love the flora and fauna of the island. The tropical weather is pleasant, the people are caring, and they judge their life based on the natural beauty of the island. Their culture is paramount and it sets the stage for recovery. Most Puerto Ricans dedicate popular music, poetry, and other forms of artistic expression to the Island (Puerto Rico Patria Mia, Verde Luz, Preciosa). Even in the initial days after the hurricane, neighbors, and families were meeting together for collective cookouts, singing Plena and playing traditional instruments (maraca, pandereta y

pandero). It was impressive to see the broken environment and hundreds of cars in the highway looking for connectivity. Many of those were just looking for someone to talk too, dealing with their loneliness and fears.

A cultural sense of place is denoted by various activities, such as community gatherings where information is exchanged, groups learning about customs and traditions, and discussions focused on learning from a common history. These gatherings can be around faith, music, meals, education or other local ways of coming together to share information and support each other. The culture typically takes the longest time to reestablish a sense of place in the community because it involves recovering history.

Environment

Puerto Rico, the island and its people, were damaged by the ferocious winds and rains of Hurricane Maria. This was the most powerful hurricane to affect the island in more than 100 years. Most concrete houses survived, the trees were torn from their roots, and the infrastructure was so damaged that it will take months for the island to regain electricity, clean water, communications, adequate medical care, and medicine. Some concrete structures were lost to mud slides and overflowed rivers. When people saw the vegetation destroyed, they were emotionally impacted.

The general sentiment was: if the island is destroyed, what will happen to me? By the third week after the hurricane, the island began to provide positive reinforcement to the people who love her. The trees began to show new leaves even though many of the roots were still exposed. The flowers began to grow in the gardens, and the tropical sweet smells of fresh vegetation were present all around. While most people are still without electricity, water or jobs they are celebrating that the mountains are turning green again, the trees are growing leaves, and the flowers have begun to blossom.

Environmental activities related to re-establishing a sense of place include the community knowledge of, and involvement with, native plants and wildlife, the extent to which the natural environment was destroyed, community plans to preserve natural resources for future generations, and the extent to which community members actively participate in environmental conservation and restoration activities. Helping people re-establish their ecological sense of place involves identifying ecological segments of the community that were destroyed by the disaster, utilizing the community knowledge of native plants and wildlife, exploring and explaining the interactions between

individuals and the environment, establishing a level of comfort between them, and bringing those ecological segments back into the community.

In the case of Puerto Rico, a tropical island, it is incredible to see how most of the vegetation is quickly coming back to life on its own. In less than a month, there are places which are already green. However, the impact on the environment are still very visible. For example, in the eastern part of the island the palm trees are standing but the branches have been turned upside down. The reaction of the local people are expressions of pain, similar to when a child in the community is injured.

Solution-focused

People were so distressed that in the first 2 weeks, over 30,000 relocated to Miami. Many others began to use their transformational power to figure out what they needed and determine how to change the needs into opportunities to improvise and succeed. For example, there are bankers, teachers and other professionals serving as drivers, interpreters and guides for various governmental and non-governmental organization that have arrived at the island to support the recovery. Their efforts are a testimony to the positive effects of coping, which was exhibited by people who were surviving, facing a new reality, and heading back to work in spite of very difficult circumstances.

A solution focus place based activity to re-establish the sense of place, requires critical thinking and a genuine dialogue for community-led answers to the problems caused by the Hurricane, rather than focusing on a list of items lost or how the hurricane exacerbated existing problems. A community must develop long-term solutions by nurturing whatever resources and strengths it possesses and by making them sustainable on both individual and community levels. Ultimately, disaster-affected communities must be the architects of their own psychosocial recovery and what the re-established place will look like.

Social capital

Puerto Rico has always enjoyed the benefits of what is called the underground economy. The Puerto Rican people use their talents to help each other recover. Some examples presented in the media are:

- An island mayor drives to an underpass to communicate and sends runners with messages so that city business is conducted. This man is doing the duty he was elected to do.
- Stores and restaurants are opening and operating outdoors.

- Since there is no electricity and cell phone service, people have begun the old tradition of hanging out in small groups and talking about solving existing community problems.
- People are getting water for drinking and bathing from sources in the hills. Trucks collect the water and sell it in neighborhoods to people who do not have the wherewithal.
- Many people are scrounging for materials that were displaced by the hurricane so they can rebuild or sell these items in the metro area.
- People that have electric generators are inviting the neighbors to share a meal, have some ice and charge their mobile phones.

Neighbors helping neighbors may be a positive tool for reconstructing the community. This gives people ownership over community interventions and fosters a sense of resiliency in the affected communities. At the same time, this provides an infusion of financial resources by implementing programs, such as cash-for-work. Potential resources may include a retired carpenter willing to train younger members of the community, some unused land that could be used for a communal facility, unemployed youth who can provide energy and enthusiasm, a farmer or other food producer and some people willing to prepare food for communal laborers donating their time and energy, and/or some trustworthy community members willing to put in time and effort to design a community project.

Review of the Literature

The review of the literature is divided into five sections: (1) psychosocial impact of Hurricane Maria, (2) the importance of place for community members, (3) psychosocial support as a conduit for place-based interventions, and (4) place-based psychosocial support strategy

Psychosocial impact of Hurricane Maria

Disasters, whether natural or human-induced, damage the location that they impact and the emotional fabric of the survivors. Physical wounds, which can be seen, can be treated and will heal given sufficient time. Emotional wounds, which are not seen, exist in the psyche and the memories of those affected and may linger because they go unnoticed.

Hurricane Maria instantly fractured the social and psychological community networks as evidenced by the displacement and relocation of thousands of individuals to Florida in the first 2 weeks after the

hurricane. Thousands of people lost their sense of place. When the physical, social, and psychological place is destroyed, disaster-affected people grieve their place in ways similar to mourning a death. The loss of access to places of cultural and social significance and the resulting loss of connections to other affected people undermine the neighborhood ability to act. This can exacerbate the grief.

Disaster-affected people often feel out of control and experience helplessness and vulnerability. Hurricane Maria disrupted and destroyed the lifestyles, places, and feelings of safety of the people throughout the island of Puerto Rico. The impact of losing access to running water, electricity, and communication can cause people to see the world as threatening. This results in some individuals banding together in groups to help re-establish boundaries and structures, thereby creating a new sense of place. That is the crisis brought about by the impact of Hurricane Maria, which causes a sense of loss and the desire to escape from what is now perceived as a threat. It also fosters creative problem-solving and a positive transformation from the chaos that now exists. Even when the community reacts in a productive manner to the impact of the hurricane, changes still occur with respect to the social and emotional lives of individuals, the resilience of families, and the cultural fabric of communities.

Hurricane Maria was an extraordinary event that occurred across the island. In one night, it contributed to the collapse of the existing individual, familial, and societal structures. That caused considerable harm to the physical, social, and psychological environment. The results of this event will be felt for many years to come.

The impact of Hurricane Maria and the combined effects related to the damage to the natural environment and the destruction of the infrastructure has negatively impacted the place and spirit of the people. Moreover, the reliability of social networks, the government, and private community support systems has proven ineffective in alleviating suffering.

Importance of place for community members

Fullilove (1996) defined place, as a setting in which people feel that they have a sufficient living environment. The perception of disaster-affected people is linked to the surrounding environment through three key psychological processes: attachment, familiarity, and identity. Place attachment involves a mutual caretaking bond between a person and a beloved place. Familiarity refers to the processes by which people develop detailed cognitive

knowledge of their environment. Place identity is concerned with the extraction of a sense of self based on the places in which an individual spends his or her life. Each of these three psychological processes can be threatened by displacement; consequently, problems associated with nostalgia, disorientation, and alienation may ensue (Fullilove, 1996, p. 1516).

Williams and Stewart (1998) functionally defined place as a collection of meanings, beliefs, symbols, values, and feelings that individuals or groups associate with a specific locality. A disruption of place impairs the personal and community ability to integrate their past with the present life because of the lack of tangible social and environmental cues and symbols. This disruption of place may be manifested in the fracture of emotional bonds that people form over time; the loss of strongly held values, meanings, and symbols; the loss of the quality of place, which may be taken for granted until it is threatened or lost; the loss of place meanings that are actively and consciously constructed and reconstructed within the minds of the survivors; and/or the loss of shared cultures and social practices (Fullilove, 1996).

Loss of place has a negative influence on the physical, social, and psychological well-being of disaster-affected people. Shalev and Ursano (2003) indicated that physical needs, such as hunger, pain, or dehydration, can cause people to feel insecure and apprehensive about their future.

Furthermore, Davis, Grills-Tequechel, and Ollendick (2010) found that the loss of familiarity with pre-disaster social networks, community structures, and financial and personal resources disrupts social, communal, and regular daily living. This generates significant distress. This has been the case in Puerto Rico where long lines at gas stations, the loss of electricity and water, the inability to secure funds at ATM machines, and the disruptions in daily routines are blamed by the local press for the distress expressed by people, in addition to the increase in emergency room visits for physical and psychological symptoms.

More than 30,000 people have left the island in the last two weeks. The press reports that 100,000 people will relocate permanently to the United States. While disaster-affected people may feel safer and happier in this new setting, they too will be emotionally affected as time goes by because of the impact of the new environment. The forced separation from Puerto Rico as a result of Hurricane Maria uproots people from their cherished neighborhoods and communities, familiar environments, and from the certainties of life. The uncertainty related to when the recovery will be

completed and they can return to Puerto Rico can cause extreme distress, enhancing feelings of separation, disconnection, detachment, and the inability to relate with others (McFarlane & Williams, 2012; Norris, 2002; Shalev & Ursano, 2003). Clearly, programs aimed at helping disaster-affected people overcome these problems associated with the disaster and loss of place would be beneficial.

Psychosocial support as a conduit for place-based interventions

Hurricane Maria offers the opportunity to develop place-based interventions that will reconnect families and neighbors. Psychosocial support is an accepted practice during the recovery and reconstruction phases following natural disasters. Saraceno (2006) suggests that psychosocial support ameliorates the negative reactions to enormous losses, such as grief, displacement, disorientation, and alienation. These effects are often ignored in the immediate aftermath of natural disasters and forgotten during the reconstruction phase. Psychosocial support builds on the knowledge and awareness of local needs and protective factors to provide psychological and social support to people affected by natural disasters. The aims of place-based psychosocial support activities are to enhance the resilience of disaster-affected people to achieve psychological competence by empowering them to overcome grief and move forward in a collaborative fashion.

There are several steps that need to be taken with the community as the primary actor: (1) input should be obtained from all community members through community mapping exercises, (2) systematic information should be gathered to assist the community in prioritizing its perceived needs, (3) community resources and human capital should be identified, and (4) community members should be involved in planning, developing, monitoring, and reporting the recovery projects (Prewitt Diaz & Dayal, 2007).

Psychosocial support re-establishes the social and psychological well-being of people and it provides the tools that individuals can use to rebuild their social networks. This approach provides the tools and the space so that people recognize the emotional impacts of the disaster, express their feelings, and initiate a process of reconstructing their lives within the social networks in their neighborhoods and communities.

Places may act as thresholds through which the living can contact those who have gone before, with human and non-human lives born and yet to come. If one takes root shock seriously, then caring for a place is a

way to repair our worlds to help create socially sustainable cities across generations. Through place-based psychosocial support activities, affected people are called upon to be resident experts and perceive the disaster-destroyed location as an inhabited place. In this way, affected people slowly begin to remember and there are possibilities that shared belongings can occur in a re-established place. Through psychosocial support activities, affected people accept responsibility for being unprepared for a disaster, engage in mourning activities, begin a process of emotional transformation, and, as a group, visualize and develop a new place. Addressing loss becomes a dynamic developmental path in which we discard the ruins caused by disasters and embrace a new beginning in a re-established place.

Place-based psychosocial support recognizes that affected people themselves are the subjects of their own recovery by recognizing their personal emotional needs, the community environment, and the steps that should be taken for reconstruction. It is an integral, interdisciplinary, inter-institutional, and intersectorial process (Prewitt Diaz, 2008) that allows the individuals, families, and communities to re-establish their resiliency and their social, functional, and psychological development in such a way that they can resume or recreate their life.

Place-based psychosocial support strategy

Several factors interact with respect to the growth and welfare of an affected person. These factors are geographical (space and ecological factors), physical (food, shelter, protection, and medical care), psychological, (attachment, affection, and self-esteem), spiritual (belief system, identity, and values) and social (family, friends, and a sense of place to which one belongs). A person belongs to and interacts with the community in which he or she find himself or herself, regardless of whether that community is original or adopted. Therefore, to enhance recovery, reconstruction, and resilience, we should encourage affected people to act at the individual, family, place, and community levels.

Prewitt Diaz (2013) suggested that some place-based psychosocial support activities that foster place attachment include:

1. Enhancing the survivors capacity to prepare their own place development plan with strategies for implementation;
2. Increase the information base by mapping the place to consider natural systems, the built environment, and psychosocial systems in the area while also identifying the available social and environmental capital;

3. Facilitating the decision-making capacity of the community by encouraging the participation of all community segments;
4. Enhancing negotiations and conflict resolution capacities for all disaster-affected people involved in the process;
5. Facilitating involvement of other outside agencies or groups as needed to improve the psychosocial, cultural, ecological, economic, and legal environment in the target place within the larger community; and
6. Designing and executing adaptive resilience projects.

Place-based psychosocial support empowers neighborhoods and communities to identify their cultural, ecological, and social capital to improve collective efficacy and alleviate fear in children and adults alike during the reconstruction phase. This approach is a compassionate tool that provides support and equal access to services for all segments of the community. Place-based activities:

- are participatory in nature and provide a mechanism whereby all segments of a community can identify the risk and resilience factors in their geographic, ecological, cultural, economic, spiritual, social, and psychological place.
- provide a physical and temporal space for all members of a community to identify their losses, what they need to rebuild, their social capital, and what the affected communities need from outsiders and other stakeholders.

A disaster emotionally transforms affected people (Hobfoll et al. 2008). To understand place meaning, one must understand emotional transformations of space to place. The emotional energy while sharing stories will lead the community to explore and develop strategies to move forward in re-establishing place. In a community, the participants of a meeting may experience two types of emotion: feelings of the experiences and feelings of sharing them with others in a public forum. Feelings of the lived experiences immediately associate the affected person with his or her environment in ways that can clearly be understood by the audience.

The role of place-based psychosocial support in its initial stages is to seek place meaning, regardless of where the stakeholders believe they are in the disaster cycle. These activities promote an understanding of the sense of place predicated by the changing experiences, feelings, and memories of the affected people. How affected people feel about their neighbors, families, communities, and places of the past and present will shape their memories and their stories into an emerging new place.

Place-based activities provide a space for

re-establishing a sense of place. Sense of place refers to psychosocial support activities that help people face the impact of surviving personal losses after Hurricane Maria. Survivors examine the ways they think and act in order to reconstruct their lives as environmental, social, and ecological changes take place during the reconstruction phase. Place-based psychosocial support activities identify survivors as the primary actors in the re-establishment of a sense of place. Representatives of all sectors and groups from the community are actively engaged in making communal decisions, making the time and effort to choose their goals, identifying resources, and formulating their action plans. All of these actions help empower them and their communities.

Re-establishing a sense of place is an internally focused process in which disaster-affected people prioritize their activities instead of relying on outside help. It is a relationship-building activity that brings all community members together. By identifying assets, the disaster-affected people identify the human capital that they have in their community.

Hurricane Maria highlighted the importance of memories in re-establishing place, as well as exercising control over meaningful space, the manipulation of that space, and the recreation of some essence of significant past settings in later life. Such acts have important psychological consequences. Specifically, disaster-affected people are motivated to effect these changes in order to discover, confirm, and remember who they are.

Summary

It is evident that the intensity of disasters like Hurricane Maria will continue to be experienced in the Caribbean. The humanitarian crisis will be characterized by complicated issues of mental health and psychosocial support. In such a situation, the established model of place based psychosocial support activities can effectively be used to deal with the issues of protecting vulnerable survivors, who often fail to navigate resources and support, remaining marginalized.

Place-based psychosocial support as a strategy has a multi-dimensional impact. It ensures interventions on all three levels (individual, family, and community) and it is accepted by communities faced with stress and traumatic experiences without any stigma attached to mental health issues. Place based psychosocial support activities are provided by community volunteers in a culturally sensitive manner to

strengthen the resources in a community and establish the self-reliance of survivors after a disaster.

Psychosocial support activities recognize the strength of a community inhabitants and it facilitates other interventions. Eventually, integrated approaches may have the potential to rebuild the support systems for vulnerable survivors to facilitate normalization. This approach holistically builds an umbrella of support by bridging gaps between the specific needs of different sectors (e.g., livelihoods, housing, health, nutrition, sanitation, and psychosocial support). Furthermore, coherence is actualized between the support system and the affected people.

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Author Biographical Notes

Dr. Prewitt Diaz, is a Humanitarian psychologist with over 30 years of experience in developing and implementing psychosocial support strategies in over fifty major disasters around the world. He was the recipient of the 2008 APA International Humanitarian Award. He spent two weeks in Puerto Rico during the immediate response in affected areas of the Island of Puerto Rico.