

Empowering the communities most vulnerable to disaster

December 24 2019, by Anuradha Varanasi



Beedasy (front, right) with a group of SHOREliners. The SHOREline program empowers youth to help them recover from disaster. Photo courtesy Jaishree Beedasy

In her prior life, Jaishree Beedasy was teaching chemical engineering

courses. Then she decided to pursue her main interest, which is studying the impact of disasters on the health of vulnerable communities. While disasters don't discriminate against people when they strike, the fact remains that during the aftermath of disasters, the most vulnerable groups of society bear the brunt of the burdens. As research project director at Columbia University's National Center for Disaster Preparedness, Beedasy studies those impacts and how to facilitate disaster recovery.

Children, particularly, are the most vulnerable, and Beedasy says that other factors like socioeconomic and immigration status, race, housing stability, and disabilities come into play during the lengthy process of recuperating from a disaster. In an interview with State of the Planet, she talks about her research focus areas and her observations from the field.

Can you start by telling us more about your research work on the long-term recovery from Hurricane Sandy?

We found that [household income](#) had a major influence on whether individuals could go back to living their normal lives after Hurricane Sandy. In fact, those who had applied for assistance through the Build It Back program and the Federal Emergency Management Agency had lower odds of recovering from such a massive natural calamity as compared to those who did not apply in the first place.

In New Jersey, one of our findings showed that [children](#), particularly those who were living in houses that had minor damages post-Hurricane Sandy, were four times more likely to suffer from emotional and psychological issues and twice as likely to have sleep disorders as compared to children whose houses were not damaged at all. Interestingly, when we studied their mental health impacts further, we

found these children were experiencing higher levels of emotional and mental distress as compared to children who were living in homes with major structural damage.

What did you learn from studying the aftermath of the BP Gulf oil spill off the coast of Louisiana, and how are the communities recovering from it nine years later?

We recently completed the last stage of our research that focused on the socioeconomic and health impacts and related changes in the same individuals over the last few years. Our study began in 2014 in Louisiana.

Even nine years after the disaster, the problems that continue to linger for coastal communities in Louisiana are related mostly to economic hardships. Many individuals lost their jobs or main source of income, as many of them belong to fishing communities. Their children still have some effects on their health. Children are particularly vulnerable to the pollution and the economic consequences of the oil spill. Exposure to tar, dispersants and oil being burnt and dispersed in the air may cause respiratory and dermatological ailments. Symptoms may include shortness of breath, wheezing, tightness in the chest, burning sensation in the nose. Also, other issues like being depressed, sad, nervous and having sleeping problems.

We found positive relationships between Gulf oil spill exposure and [adverse health effects](#) in children. While the health symptoms are not as bad as they used to be nine years ago, they still continue to linger. It is really sad to see how children may have been the most vulnerable to the [health impacts](#) of environmental degradation that took place after the explosion and sinking of the Deepwater Horizon Oil Rig in the Gulf of

Mexico.

While we were in the field, the one thing that was encouraging was the fact that these fishing communities, and even those who work in the oil industry, became closer by volunteering to do a lot of activities together. This included beach clean-up activities and connecting other locals to government officials who could help in providing the resources required.

We also share the results of our research with the local community, peer researchers, and policy makers to promote more effective public health policies.

What more do you think should be done to improve access to resources for vulnerable communities following a disaster?

It is important to give the affected community, in particular the children, the opportunity to participate in [disaster preparedness](#) programs, because that is what they want to do. And they do it well. With our youth empowerment program, SHOREline project, which stands for "Skills, Hope, Opportunities, Recovery, and Engagement," they showed us how they were ready to take on any project and make it a success.

The youth of the Gulf Coast in Alabama, Louisiana, and Mississippi have survived the most disasters in the last decade as compared to any other part of the country. They need the opportunity to develop skills that go beyond the region's traditional fields of fishing and oil work. Our SHOREline project was carried out in five high schools across those three states and we taught them how to develop their leadership and communication skills. This included initiatives like equipping them with the skills required to cook during power outages and how to handle [emotional distress](#) in times of disaster, among others.

What new project have you been working on lately?

Currently, I'm working on social media's role in disasters. I am specifically looking at how communications between individuals online affected them during the Gulf oil spill. Also, what kind of online communications were taking place before and after the oil spill and whether there was intentional or unintentional false information being circulated, and how such information was being countered.

I'm particularly interested in understanding how people and organizations on social media interacted to share information and resources, contributed to mitigating the impacts of the oil spill, and how social media can be leveraged for future [disasters](#).

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