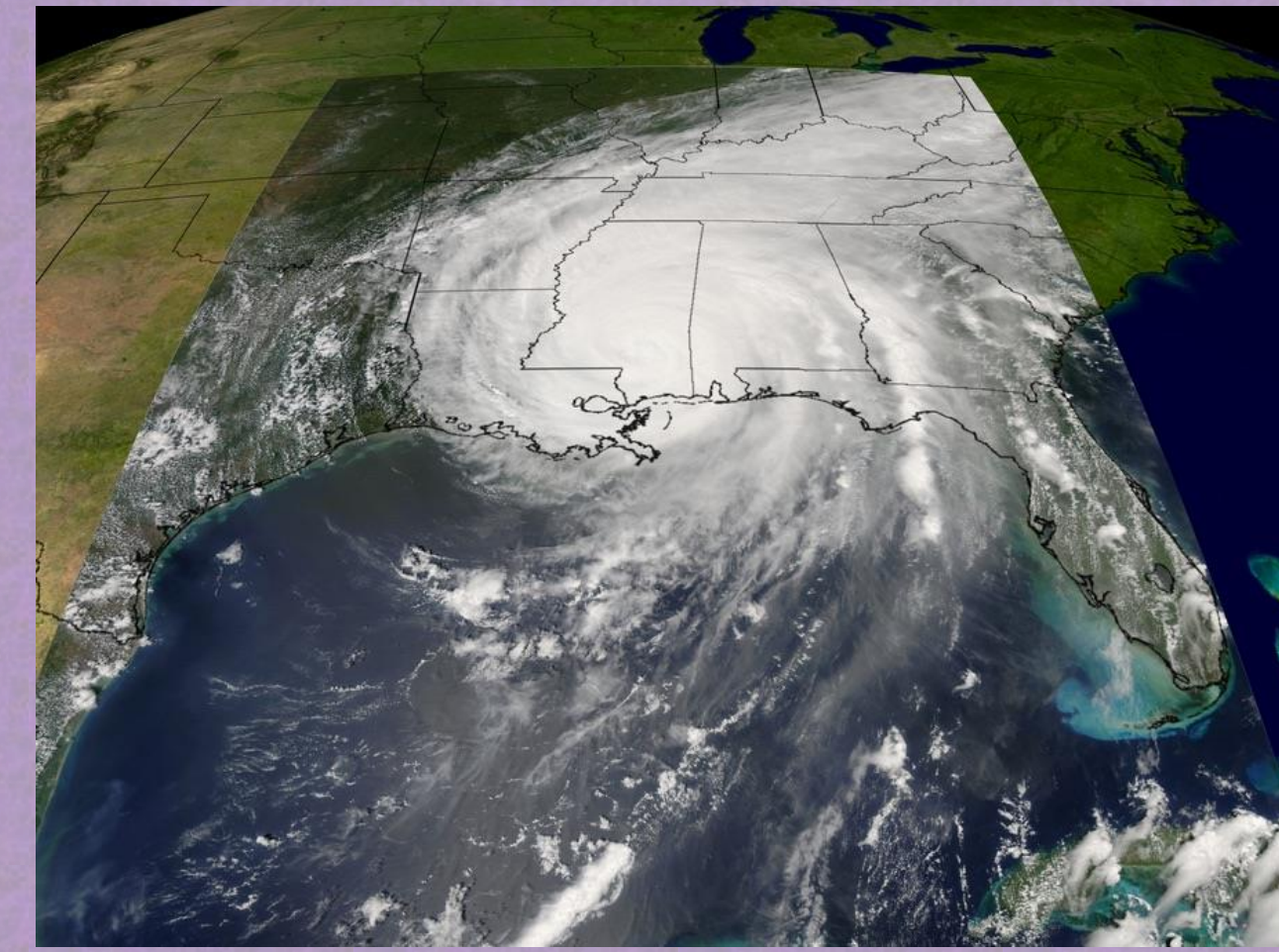




Major U.S. Hurricanes: A Comparative Analysis of Victim Experiences Using Transcultural and Behavioral Models

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Study Overview

AIM: Describe and compare experiences of individuals during Hurricanes Katrina (K); Matthew (MA); Florence (F); and Michael (MI) using a transcultural model and a disaster specific behavioral framework.

RESEARCH QUESTION: What similarities and differences are noted in U.S. victim descriptions of experiences during Hurricanes Katrina (1995); Matthew (2016); Florence (2018); and Michael (2018)?

METHOD & SAMPLE: Comparative content analysis of 4 data sources: Interviews with Katrina victims in 2009 (N = 14); and scholarly journal articles (N = 45); lay media reports (N = 90); selected government reports (N = 17) about any of these hurricanes.

Government Changes

Post-Katrina Emergency Management Reform Act of 2006

- Allows federal assistance before request from state
- Restructured FEMA with new leadership
- Developed National Disaster Recovery Strategy and National Disaster Housing Strategy
- Created Disability Coordinator position and guidelines to accommodate individuals with disabilities
- Added protection for household pets and service animals
- Created National Emergency Family Registry and Locator System to reunify separated family members

Disaster Recovery Reform Act of 2018

- Developed new mandates for inter-agency collaboration
- Created National Veterinary Emergency Teams
- Offered FEMA assistance for building code and flood plain management
- Prioritized utility restoration for healthcare facilities
- Identified evacuation plans for tribal and territorial governments
- Classified childcare facilities and foodbanks as eligible private, non-profits

Divergent Views on Climate Change

- Rescinded required consideration of climate science in design of federally funded buildings (e.g., required elevation to avoid flood)
- Incorporates risks from climate change in new state level policy agenda

FEMA Changes

- Congress granted FEMA ability to move resources before storm
- Expanded public communication via new social media platforms

Research/Practice Implications

- ~ Continued study to address multiple and complex concerns of vulnerable persons in large scale disasters.
- ~ Consideration/development of options for pets should be best practice as many persons note this as a concern.
- ~ Promote awareness of and evaluation skills for credible social media platforms/postings to exchange timely information in all phases of disaster.

Giger & Davidhizar Transcultural Assessment Model (Giger, 2016)

Communication	Embraces entire world of human interaction and behavior; verbal and non-verbal
... I put a white towel on the fence outside and I was swinging a white towel around when a helicopter would come. (K)	
I want people to know, man, when they say, 'get out of your house' – leave your house, listen to them, "when they say 'no first responder is going to be able to get to you' – they're not joking. (MI)	
Social Organization	Manner in which a cultural group organizes itself around family group (family structure, religious values and beliefs, and role assignments may relate to ethnicity and culture)
I guess they felt the neighborhood people could survive better because they had each other. (K)	
[The dentists were] participants in the response rather than victims of the crisis. (F/MI)	
Time	Past, present, or future oriented. Preventive healthcare requires some future orientation because actions are motivated by future reward
It usually takes us 10 or 11 hours [evacuation destination], it took us 22 hours to get there. (K)	
...We can't wait till somebody says it's bad. We've got to get ready now, so that we have resources. So if it is bad, we're there. (MA)	
Space	Distance they interact (intimate, personal, social, public). Concept of territoriality or violation of personal or intimate space
...she brought all of her animals to my house so at its fullest we ranged from 8 to 82 in age and about 7 or 8 dogs and 3 cats. (K)	
...posts were a microcosm, zeroing in on the neighborhood, showing the [Matthew] experience was different inland than on the coast. (MA)	
Biological Variations	Biological differences, especially genetic variations
...he was bipolar and I knew he was stealing it but I knew he really need so much because he was going through this big problem [Katrina], we all were, and I figured God would take care of me so I didn't mention it. It was the right thing to do under the circumstances. (K)	
...nothing had prepared me for the intensity of the odor in our flooded home. Perhaps my own negative physical reaction was caused by the fungal odorants. Perhaps some mold VOCs were biologically active. (K)	
Environmental Control	Ability of persons to control nature and plan and direct factors in environment that affect them
I'm an hour and a quarter away, and my daughter's dying, and I can't do anything about it. I can't think of anything that is more related to hell than that. (MI)	
.....some things that you don't ever really kind of think of come up that are totally out of your control. (MA)	

Backburnering Model (Owens & Martsolf, 2014)

4 Ways Describe Backburnering	Factor 1. Media Impact	Factor 2. Evacuation	Factor 3. Preparation	Factor 4. Attention	Factor 5. Recovery
Way 1: Prudent Backburnering	Used media in all phases; impact phase focus was monitoring damage from afar	Pre-arranged evacuation	Individually prepared in advance to evacuate	Careful and/or planned non-attention to health-related concerns	Preparation a plus
We were always at homes of people that we knew. The first people we knew were dog people so we knew we could take our pets.. (K)					
...waiting at a [hotel]...I'm not one to be overly cavalier about powerful hurricanes. Most people...are already shuttered away [with] ice, food, generators, flashlights, radios, fuel and water. But they should all know in a really bad storm, preparation only goes so far. (MA)					
Way 2: Impromptu Backburnering	Used media in impact /emergency phases; impact phase focus was evacuation travel	Last-minute evacuation	Scrambled to prepare to evacuate	Spontaneous non-attention to health-related concerns	Lack of preparation required seeking assistance; this happened if sustained evacuation; returned to seek new home, often rental
I was lucky, my employer had prepared...They bought a house a few days before...I and about 15 other guys went and stayed [there]. (K)					
We were originally thinking about staying before the evacuation order...we talked it over, and our stuff is just stuff. Even if we come home and there's nothing left that's salvageable , you can live without stuff, but replacing [wife] and the cats is hard. (MA)					
Way 3: Deliberate Backburner	Used media in all phases; impact phase focus was family or monitoring local conditions	Opted not to evacuate	Individually prepared to stay	Intentional non-attention to health-related concerns	Planned shelter-in-place until stability returned
We did not evacuated (sic) because my husband didn't want to because we have 2 large German shepherds... (K)					
I don't know what to expect, having never been through anything like this... We've stocked up...and are planning to not have power for 2 to 3 days or up to 2 weeks...From what we've been told, the main thing is to be prepared. (MA)					
Hell, it's the ones who don't know what they're doing that cause the problems...old-timers know what the hell we're doing. (F)					
Way 4: Unforeseen Backburner	Used media in emergency, impact, and reconstruction phases; impact phase focus was to survive	Situational non-evacuation	Not prepared at all	Reactive non-attention to health-related concerns	Unavoidable shelter-in-place until stability returned; focus on continued survival; may have spent reconstruction time in alternative housing

...but it was too late. We got the radio on but he was saying, "Leave now, if you can leave." But it was too late. (K)

There are going to be people who can't evacuate. They're sick, they're old...incapacitated. If rescue personnel have to rescue able-bodied people, they're not available to rescue those who really need help...for concern of your fellow citizens, get out when they tell you. (MA)

Findings

Similarities

Differences

Media for Information

We had radio and you could find out anything... (K)

Social media allows the connection that brings us closer during severe conditions like this hurricane. It let my friends and family know how I was and the conditions of the environment that they would not get from the network broadcast. (MA)

Communication

Cordless phones didn't work...that old phone worked I will never get rid of it...you want to keep one land phone. (K)

He posted on Facebook, "I'm alive." (MA)
 "Turn around, don't drown."
 [message]...primary goal to get people out of floodwaters...a lot of people lose their lives going into floodwaters (F)

Government Response

The policeman and the National Guard weren't doing nothin' (K)
 Citizens here are really good about evacuating, and that's why its crucial that you don't sound the alarm immediately... (MA)

You have a decent home...in front of FEMA...they look like they couldn't care less, or they think you're lying. It was just so painful I said forget it. (F)

Response Models

...dentists constitute a significant source of non-physician healthcare manpower which can contribute vitally to the public welfare (F/MI)
 Traditionally, we waited until the storm completely cleared out, then spent 1 -2 days assessing damage...We've turned that model upside down (MA)
 ...many of our clients are choosing to go beyond the minimum codes...utilizing higher standards (MI)

Concern for Pets

...another worry, we had left the cats behind. We figured cats can survive. It was enough to take the dogs. (K)
 We've evacuated twice...the reason we evacuate is because we have pets....The pets are our main criteria. We want to be with them. (MA)
 ...where experienced veterinarians and rescuers work[ed] side-by-side with people who had never walked a dog [at a pop-up shelter] (F)

Preparation by Area

They didn't have any idea how to deal with something so massive, such a terrible storm and the aftermath. (K)
 Today, I signed an Executive Order declaring a State of Emergency in every Florida country to ensure we have resources...across our state. We are preparing for the worst, but hoping for the best and we will not take any chances... (MA)

Human Response

... Hearts were being opened to people that were complete strangers. I mean, what fascinates me is when things are at their worst people are usually at their best. (K)
 Residents brought their things ...churches provided tables, chairs, and air mattresses for sleeping. Our members are willing to help with anything. When people are hurting, those are the greatest opportunities we'll ever have to show people love... to demonstrate love to them. (MA)

Meaningful Possessions

I took some green masking tape, tied my birth certificate, my medical records, I took a sandwich bag and put my little \$300 in it, I had my mom's pictures, see she left [died] just 3 months before. I had my mom's pictures, my favorite picture to have of my mom, my uncle, and my aunt... (K)
 I had a ton of photos and I would always say that I was going to scan them... But after Hurricane Matthew came, I finally did it. They are really priceless photos... (MA)