

## 45th Biennial Convention (16-20 November 2019)

### Major US Hurricanes: A Comparative Analysis of Victim Experiences Utilizing Transcultural and Behavioral Models

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**Introduction:** Vulnerable populations risk poor health outcomes during disasters. Demographic characteristics often associated with vulnerability in disasters include female gender; marital status of single, widowed, or divorced; work status of under or unemployed; immigrant status, dependence on public assistance; lack of homeownership and/or health insurance; and one or more chronic illnesses. Hurricane Katrina was a category 5 storm that impacted the Gulf Coast from August 25-29, 2005 (Plyer, 2016). Hurricane Matthew was a category 5 storm that affected four states on October 7-8, 2016 (TWC, 2016). In 2018, two major hurricanes hit the United States, Hurricane Florence (Dodd, Aradillas, & Keating, 2018; Guterl, Godlewski, & Nestel, 2018; National Hurricane Center, n.d., Rhodan, 2018) and Hurricane Michael (Hurricane Michael, 2018). In the years between Katrina and these more recent events, United States (U.S.) government level changes related to preparedness and response have occurred (Greenberg et al., 2014; Public law 109-295, 2006); however, there is little information about differences in outcomes from the victim perspective. The aim of this qualitative study was to describe and compare experiences of individuals, especially those considered vulnerable, during the major disasters of Hurricanes Katrina, Matthew, Florence, and Michael. Our previous research considered only Hurricanes Katrina and Matthew, asking the research question: What similarities and differences are noted in U.S. victim descriptions of their experiences during Hurricanes Katrina or Matthew? Results indicated that many changes related to preparedness and response have occurred at the government level in the timespan between these events. Similar challenges for victims have been noted. Evacuation remains an underused option. With the large scale damage from the two hurricanes in 2018, our study continues to provide additional insight and lend depth to our initial data analysis.

**Methods:** A comparative content analysis (Weber, 1990) from the original study comparing Katrina and Matthew considered four data sources: a secondary analysis of interviews conducted with Katrina victims in 2009 (n = 14); and scholarly journal articles (n= 20), lay media reports (n = 52), and selected government reports (n = 9) about either hurricane. Media reports added contextual description of disaster circumstances and rich participant descriptions. IRB approval was obtained to utilize previously collected data about Hurricane Katrina for secondary analysis. A study specific codebook was created to identify, categorize, and describe, experiences by word, word sense, sentence, and theme. A transcultural model, the Giger and Davidhizar Transcultural Assessment Model, (Newman-Giger, 2014) and a disaster specific

behavioral framework, the Backburning Model (Owens & Martsolf, 2014), further guided data comparison. The six concepts of the transcultural model (communication, social organization, time, space, biophysical variations, and environmental control) were selected to compare and evaluate perspectives of victim experiences specifically from a cultural viewpoint. The Backburning Model considered four ways, or behaviors (prudent backburning, impromptu backburning, deliberate backburning, and unforeseen backburning), that victims frequently use to manage disaster experiences. The four ways encompassed five factors: media impact, evaluation, preparation, attention, and recovery. Descriptive statistics were calculated to provide demographic information about the sample and analysis criteria. The current study is adding to the same data sources: secondary analysis of interviews conducted with Katrina victims in 2009 (n = 14); and scholarly journal articles (in progress), lay media reports (in progress), and selected government reports (in progress) about hurricanes Florence and Michael.

**Results and Discussion:** Data analysis is in progress and is expected to be completed by August 2019. Early findings confirm the challenges and benefits of evacuation (Wu, Lindell, Prater, & Samuelson, 2014) and, in particular, the benefit of availability for pet care at designated shelters. In addition, continued evolution of technology has improved the ability for victims to communicate with family and friends, an area of great concern for many, and maintain access to prescription medicines (Traynor, 2018).

**Conclusion:** Continued study is needed to address the multiple and complex concerns of vulnerable persons in large scale disasters. This poster presentation will describe the comparative content analysis method and consider thematic findings from consideration of victim experiences from these four major U.S. hurricanes from both a cultural and disaster behavior perspective.

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**Title:**

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**Keywords:**

disaster response, hurricanes and vulnerable populations and transcultural assessment

**References:**

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### **Abstract Summary:**

Vulnerable populations risk poor outcomes during disasters. A content analysis compared victim experiences from hurricanes Katrina, Matthew, Florence, and Michael. The Giger and Davidhizar Transcultural Assessment Model and a disaster specific framework guided data comparison. Early findings confirm challenges and benefits of evacuation and the benefit of available pet care.

### **Content Outline:**

1. Introduction
1. Vulnerable populations and hurricanes: specific vulnerable population under study is persons with chronic illnesses
2. Previous research comparing victim experiences in Hurricanes Katrina (2005) and Matthew (2016)

1. Impact of government changes related to preparedness and response, including requirements for pet friendly shelters
  2. Comparison using 2 conceptual models: Giger and Davidhizar Transcultural Assessment Model and disaster specific behavior framework, the Backburning Model
  3. Content analysis of data sources: secondary analysis of interviews conducted with Katrina victims in 2009 (n = 14); and scholarly journal articles (n= 20), lay media reports (n = 52), and selected government reports (n = 9) about either hurricane
  3. New research adding experiences from recent Hurricanes Florence and Michael in 2018
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1. Continued original methods from study comparing Hurricanes Katrina and Matthew using content analysis that added new data sources (lay media reports of experiences and government reports) related to the two new hurricanes under study - data collection in progress
  2. Research Findings (in progress, analysis will be complete in August 2019)
  3. Preliminary findings confirm challenges and benefits of evacuation; importance of option for pet care; and improved ability communication during the event

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**Author Summary:** Jacqueline Owens is an associate professor of nursing at Ashland University College of Nursing and Health Sciences at Ashland University, Ashland, OH. Her nursing background includes critical care, occupational health, and disaster response. She is Editor-in-Chief of OJIN: The Online Journal of Issues in Nursing. Jackie has a diploma of nursing from Trumbull Memorial Hospital School of Nursing, a BSN degree from Ashland University; and an MSN and PhD in nursing from Kent State University.

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**Author Summary:** The focus of much of my scholarship is cultural competence and my work has included designing and implementing a Navajo Cultural Immersion course for baccalaureate nursing students, analysis of a cultural perspective of victim experiences in hurricanes, and research exploring the influence of a cultural simulation on perceptions and intent to act among senior-level baccalaureate nursing students.