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I Have a Snickers Bar in the Trunk of My Car: Student Narratives of Disaster Risk, Fear, Preparedness, and Reflections on Union University

William E Lovekamp, *Eastern Illinois University*
Sara K McMahon, *Eastern Illinois University*

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William E. Lovekamp
and
Sara K. McMahon

Eastern Illinois University

Email: welovekamp@eiu.edu

This research examines college students' experience, risk perceptions, fear of and preparedness for disasters and differences in female and male views. We conducted focus groups with students about their experience, risk perceptions, fear and preparedness, their reactions to the February 6th, 2008 Union University tornado. We found that students are generally aware of the risks they face, usually have limited experience with disasters, are not well prepared, could not identify how their university was prepared, adopt fatalistic attitudes about the importance of preparedness and believe the university will take care of them. Also, women were much more likely to report being fearful. Many students were shocked about the Union University tornado and began asking more questions about ways their university is prepared.

Keywords: disaster, risk, fear, preparedness, gender, Union University

Introduction

Thousands of college students were displaced from their academic institutions after Hurricane Katrina. At least thirty colleges and universities across Alabama, Mississippi and southern Louisiana sustained varying degrees of damage (Chronicle of Higher Education 2005). Some 90,000 students, administrators, faculty, and staff were forced to evacuate campuses which resulted in classes being cancelled from a few days in some areas to an entire academic year in other places (Gill et al. 2006). The impacts are still being felt across the southern United States and many of the most severely impacted academic institutions have recovered more slowly than others. For example, New Orleans' colleges and universities are still struggling to recover their student population. Recent reports suggest that they have recovered approximately 78% of their pre-Katrina

enrollment with very mixed trends; some are increasing while others are declining (Greater New Orleans Community Data Center 2009). Institutions have been forced to use fewer faculty members to teach students and reduce the number of administration and staff. In 2008, tornados devastated much of the campus of Union University in Jackson, Tennessee, displacing students and disrupting classes for weeks. Thirteen students were trapped in rubble, 51 were taken to the hospital, and 9 received serious injuries (Union University Tornado Coverage (2009b). The tornado destroyed most campus housing, caused major damage to other academic buildings and resulted in approximately $40 million in damages (SBC Giving to Union Surpasses $3 Million (2009a). Recent research indicates that the likelihood of hazards and disasters has increased on university and college campuses in the last 10 to 15 years (Federal Emergency Management Agency (FEMA) 2003) and as one of the most important institutions in a community, universities must be prepared for disasters. As a follow-up to a previously published survey research project we completed, we qualitatively examine college students' experience, perceived risk, fear and preparedness for disasters and gender differences in this research.

Literature Review

As our guiding theoretical framework, the vulnerability perspective stresses that disasters do not exist independently of society and are "defined, reshaped, and redirected by human actions" (Mileti 1999:18). Also, disasters are socially created and within these societies, power and resources are unequally distributed (Bates and Pelanda 1994; Blaikie, Cannon, Davis, and Wisner 1994; Peacock, Morrow, and Gladwin 1997; Peacock and Ragsdale 1997). Therefore, vulnerability to disasters is unique to individuals and communities and is socially situated within larger social structures of power relations, access to resources and patterns of inequality.

When explaining differential patterns of vulnerability to disasters, sex and gender are powerful markers of difference and inequality. Disaster vulnerability is often intrinsically connected to the social roles that we occupy in 'normal times' and how these gender roles are embedded within systems of stratification and inequality in our society. And while there has been a "gender silence" with women's voices lacking in disaster research (Bhatt 1995:3; Bolin, Jackson, and Crist 1998:29), more recent studies have focused much more on gender as a primary factor for differential vulnerability. Also, gender is inextricably connected to sex, sexuality, age, race, ethnicity and social class creating vulnerability bundles where social patterns increase and decrease vulnerability to and capacity in disasters (Enarson 2010). For instance, poor minority women were the most vulnerable to Hurricane Andrew because they lacked status, power and resources (Morrow and Enarson 1996). Also, women's roles often expand in disasters, leading to role accumulation and increased vulnerability (Fothergill 1999a). "Care work" such as taking care of the emotional and physical needs of male partners, children, elderly, the ill or

disabled, and other family members typically is the responsibility of women and before, during and after disasters these roles increase dramatically (Enarson 2010; Phillips and Morrow 2008; Morrow and Phillips 1999).

Furthermore, women tend to be more active than men in preparing their families for disasters and work at the grassroots community level. Many contributors to the on-line conference of the United Nations Division for the Advancement of Women noted, "women's domestic responsibilities situate them to act proactively to reduce risks and protect the most vulnerable" (Enarson 2001:5). In Hurricane Andrew, women were responsible for preparing family members, stocking supplies and getting the household ready for the hurricane. When present, men are responsible for the external areas of the house (Morrow and Enarson 1996). Women are also often responsible for processing, mobilizing and responding to warnings in large ethnic and multigenerational families (Phillips and Morrow 2007). Neal and Phillips (1990) found that women outnumbered men as leaders and members of emergent grassroots organizations working on community disaster issues. In another study, women were more likely to volunteer and to be willing to be trained for programs in their communities related to emergency management (Nehnevajsa 1989). Furthermore, women are often strong risk communicators and very active in community-based preparedness and mitigation activities, faith based organizations, associations, clubs, etc. (Turner, Nigg, and Heller-Paz 1986a; Eisenman, Cordasco, Asche, Golden, and Glik 2007). Preparedness is often perceived as an extension of women's traditional gender roles and responsibilities. However, Lindell and Whitney (2000) found that female students intended to adopt more preparedness measures than males and older students actually adopted more adjustments. Also, Lindell and Prater (2000) found evidence that women adopt fewer hazard adjustments when examining earthquakes. Hence, gender can also constrain access to preparedness information, warnings and forecasts for lower income women who do not have easy access to the internet, computers, media based warnings, cellular phones, etc. (Enarson 2010).

Gender also influences our risk perceptions and fear levels. Fothergill (1996) found that women perceive disasters as more serious and risky than men possibly because "women are more concerned because of their relative lack of power and control in society" (p.37). Cutter et al. (1992) found that men are often risk-takers while women are often risk-avoiders. Most disaster researchers concur that women and men perceive disaster warnings differently and also respond to them differently. Fothergill (1996) found that "women are more likely to receive risk communication, due to their social networks, and to respond with protective actions, such as evacuation" (p.39). As Enarson (2010) states, "women's pivotal roles in family life and their extensive networks based on neighborhood, parenting, school, work, and faith put them at the center of the process of interpreting and assessing warnings" (p.129). Interestingly though, Arlikatti, Lindell and Prater (2007) found that women are more likely than men to have confidence in news

media trustworthiness about seismic hazards but less confidence in peers trustworthiness. Additionally, rates of violence against women, especially spousal abuse, have been found to increase in times of disasters (Anam 1999), increasing women's fear (Fothergill 1999b; Honeycombe 1994; Wilson, Phillips, and Neal 1998). Women and children experience more emotional trauma and anxiety, while men are more likely to suffer from alcohol abuse (Fothergill 1996;1999). Women also tend to exhibit higher levels of posttraumatic stress disorder than men following disasters (Ollenburger and Tobin 1998). In their study of student narratives after Hurricane Katrina, female students experienced more stress and trauma than males and viewed the storm as very threatening (Gill et al. 2006). Many of these patterns are related to the fact that women occupy different social positions than men in society. Overall, the literature suggests that women often express more fear, and perceive risk differently than men. They must consider the safety of the children, household, family, etc., while men have historically not been held accountable for fulfilling these social roles.

As a follow-up to our previous work, this research qualitatively examines students' experience, perceived risk, fear and preparedness for disasters. We also examine gender differences in students' understandings of risk, fear and preparedness for disasters, their reactions to the Union University tornado and changes in their understandings of these issues after viewing CNN coverage of the storm. In our previous study (Lovekamp and Tate 2008), we surveyed 192 students' risk, fear and preparedness for tornados and earthquakes at a Midwestern University. The questionnaire was adapted from earlier surveys to study community awareness and response to earthquake predictions in the 1970's and to the 1987, 1989, and 1994 California earthquakes (Turner, Nigg, and Heller-Paz 1986b; Bourque, Shoaf, and Nguyen 1997). We found that Black students reported higher levels of risk for tornados than White students and increases in class rank increased perceived risk. Also, women and black students were more fearful than males and White students. However, contrary to literature and our hypothesis, females, Black students and students of lower class ranks did not report lower levels of perceived preparedness. Also, women and Black students did not engage in more survival preparedness actions than males and White students. We were surprised because gender was not a significant predictor of preparedness actions, which was contrary to our hypothesis, contrary to literature on gender and disasters and the vulnerability perspective. Also, we questioned whether giving students a standardized disaster preparedness checklist was an appropriate way of measuring their overall preparedness. Perhaps the way we measured preparedness was really measuring students' understandings of the preparedness checklist itself rather than how they think about preparedness. Therefore, in this research, we continue to examine gender issues, views of preparedness, whether students prepare, and if they believe the University is responsible for ensuring their safety. More concretely, we ask the following questions: 1) how do students perceive risk and report fear, 2) are they unprepared, 3) how does gender

influence risk, fear and preparedness, 4) what are the reactions to the Union University tornado, and 5) will students change their opinions about risk, fear and preparedness after watching coverage of the Union University tornado?

Method

In this follow-up study, we conducted focus groups with undergraduate college students at the same Midwestern University from our previous study. We generated 34 participants through non-probability convenience sampling of students enrolled in all Introductory Sociology and Anthropology classes, Social Problems and Social Stratification classes (N = 920 enrolled) and by sending emails to all Sociology majors (N = 276) during the spring semester of 2008. We chose to conduct focus groups rather than personal interviews because we felt that students may be uncomfortable participating in one-on-one interviews with a faculty member. They may be much more likely to participate in focus groups consisting of their peers with a faculty member serving only as moderator. Also, while focus groups have been used for decades to develop questionnaires, we are using focus groups to expand and reflect upon questionnaires already administered in our previous research. We believe that these qualitative student narratives will add to our earlier survey research and highlight gender differences. Since we were entering classrooms and sending emails to generate volunteers, we did not conduct any follow-ups to increase response rate because we felt this could become disruptive to classes, to students receiving email solicitation, and possibly jeopardize the ethical principle of voluntary participation.

We spent one month in the spring of 2008 recruiting students and conducting eight separate focus groups ranging from three to seven students per group. Thirty-four students participated (23 female and 11 male students), and each focus group lasted approximately 45 minutes. We divided students into separate male and female groups to measure gender differences. We were unable to separate into different racial/ethnic groups because of a lack of diversity in the sample. We scheduled the first focus group for the afternoon of Wednesday, February 6th, 2008. On the evening of February 5th, 2008, severe storms and a tornado destroyed a significant portion of Union University in Jackson, Tennessee. Therefore, with IRB approval, we showed students CNN coverage of the Union University tornado at the end of each focus group, recorded their general perceptions and asked them to reflect on their previous statements. Even though this was not intended to be part of our research, we felt that by including a measure of student awareness of the Union University tornado and how video coverage of the event might influence their views was justified since we were on a campus asking about risk, fear and disaster preparedness. Even though we did not have the opportunity to create control groups or include a pretest, we used the one-shot case study as a model for introducing the CNN coverage and used CNN coverage available on their website because it was

what appeared on the national news networks and the front page of the CNN website immediately after the event. Finally, we conducted three focus groups (14 students) the day after the Union University disaster, four focus groups (15 students) one week after, and the last focus group (six students) two weeks after. Only two or three students knew of the Union University tornado and there was no evidence of increased awareness in the focus groups two weeks later compared to the ones conducted the next day. All students were fully aware that participation was voluntary, information was confidential, and that there were no benefits or penalties for participation.

Dependent Variables

We used the survey research questions from our previous study (Lovekamp and Tate 2008) to develop nibne open-ended guiding questions for our focus groups. To measure *experience*, we asked students to 1) describe any experiences they have had with disasters. To measure *perceived risk*, we asked students to 2) identify disasters they are at risk of or exposed to, and 3) to identify the likelihood of a disaster occurring while they are at college. To measure *fear*, we asked the students' 4) how fearful or afraid they are of disasters. To measure *preparedness*, we asked the students 5) what preparedness means to them, 6) how prepared they think they are, 7) what they have done to be prepared, 8) how prepared they think the University is, and 9) what the University has done to prepare. Also, after recording their responses to these questions, we showed the students three minutes of CNN video coverage of the Union University tornado, examined their reactions to the disaster and any changes in their responses to the earlier questions. We concluded by asking if this is an important topic for college students. We audio-recorded the students' open-ended responses to our questions during the focus groups. After transcribing all of the students' responses, we completed open coding of the data and identified general themes of experience, perceived risk, fear, and preparedness using NVivo qualitative data analysis software. After initial coding, we completed a more focused coding and subdivided each of the open codes into disaster specific subcategories such as tornado, earthquake, flood, winter storm, school shooting, etc.

Results

Basic Demographic Information

The sample (N = 34) consisted of students separated into 8 different focus groups (five female and three male). Demographically, 67.6 percent of the students were female and 32.3 percent were male, which is only slightly different from the larger university population and similar to the sample in our previous research. Sixty-four percent of the students were Sociology majors while the other 35.3 percent consisted of Psychology, Communication Disorders and Sciences, Pre-nursing, Pre-medicine, Early Childhood Education, Biology, English and Business majors. Finally, 14.7 percent of the students

were freshmen, 20.5 percent were sophomores, 38.2 percent were juniors and 26.5 percent were seniors.

Experience

We began the focus groups by asking students about their experience with disasters and found that most had very little or no direct experience. Flood and tornado were the most common disasters experienced by students and were explained as follows:

> [As an infant] almost half our house was underwater. Luckily we had neighbors who were like family members who came over and the fire department actually had to take my brother, my mom and I out on a raft.

> I was at the pool and they had no warnings. I guess they didn't know a tornado was coming and out of nowhere we could see it. We were in the pool and we saw it and they sounded the alarm. Our public pool was where parents dropped their kids off and there were no parents there aside from parents of infants. This was a night swim so it was all 12 and 13 year olds, but luckily my aunt lived about a block away so I got the people I knew and some of their friends ran to my aunt's. She doesn't have a basement but we hid in the kitchen just because it was the only room with no windows. But then a bunch of other kids had to run and they just tried to find anyone's house, were knocking on stranger's houses to try to hide, and nobody got hurt luckily.

Perceived Risk

Second, we asked the students what disasters they are most at risk of. Our previous research (Lovekamp and Tate 2008) showed that perceived risk of tornados affecting students at their residence and at their community were significantly greater than for reported risk of earthquakes for both males and females ($F = 146.93$, $p = .000$) but there were no significant differences between men and women in their risk judgments ($F = 1.63$, $p = .203$). Risk perceptions varied significantly by hazard agent, by race/ethnicity, and class rank, but not by gender.

Our qualitative focus groups support our previous findings on risk perception. We found that students had general knowledge of the risks in their area and almost all of the students mentioned the risk of tornados. Many students also mentioned a risk of flooding and school shootings, but none of the students mentioned risk of earthquakes. Most of the examples were references to school shootings.

> I had to give tours all last semester and you get a lot of questions from parents about what we have on campus that can ensure that something that

> happens at Virginia Tech wouldn't happen here. As far as shootings, I think we're pretty vulnerable to something like that. You can't give anybody that guarantee at any school, but I was thinking about it. Our academic buildings are so vulnerable anybody could walk in almost any hour of the day, even late into the night. Anybody can walk into any classroom in this building right now. They could just walk right in. I think we're pretty vulnerable to something like that.
>
> Since we have such an open campus, it would be easy for someone to come in and shoot people, cause I know that's rare, but we don't really have an precautions in place in case that would happen. I mean, people that don't even go to school here could come in and wander around so…

A few students also mentioned risk of other disasters such as blizzards, severe winter weather, fire, and earthquakes, but these were not pervasive themes. Students tended to say that while they are technically at risk of these disasters, the chances of them happening are very low. Also, similar to our earlier research, there were no obvious gender differences when reporting risk.

Fear

Next, we asked the students how fearful or afraid they are of disasters. In our previous research (Lovekamp and Tate 2008), fear of a tornado striking their residence was significantly greater than fear of earthquakes for both males and females ($F = 59.25$, $p = .000$) and female students reported that they were significantly likely to express fear of tornados and earthquakes than male students ($F = 5.82$, $p = .017$).

Our qualitative focus groups support our previous findings on fear. Overall, students most commonly expressed fear of tornados. Also, female students were more likely to express fear than male students. For example, the following narratives of fear are all from female students.

> I would say yes! I am afraid cause there is nothing you can do about it…if there is a tornado, you just have to deal with it.
>
> Flooding because of where I'm from. Because one side of our town is bordered by the river and if the wall ever broke, it's flooded. So I'm really afraid of that.
>
> I'd freak out bad, very bad. It takes about five people to calm me down, cause we had a bad storm here, and I just had to watch the window, the sky was just so dark and I'm like we're gonna have one, I didn't know it

> cause I was so scared, I couldn't go to sleep, I am terrified of the weather when it gets like that, it scares me.
>
> Yes, I'm scared of anything that's close to death, hurricanes, tsunamis, all of it, I don't know how to be calm in anything like that, my hearts gonna start beating fast, I'm just not gonna know what to do, actually a tornado, that's my biggest fear.

It was also common for female students to mention their families and homes when talking about fear.

> I am more worried about my parents at home because my mom is older and my dad is handicapped and I'm just worried about what if a tornado happens there or a fire…what are they going to do with themselves…what are they going to do with our animals…who's gonna help them cause my brother lives far away from them too and that's just my big fear is what's gonna happen to them.
>
> I don't feel as safe here as I do at home because at home like I have a basement where there is a directed place to go and here I just live in a duplex and like our best bet would be in the bathroom and I don't know where to go if we were to get like evacuated I wouldn't know where to go, and I don't really know at home either, I would just assume stay at home, but I feel safer at home than I would here.

In contrast, male students did not express fear and often explained in great detail how and why they were not afraid.

> Well, [we are at risk of] technically earthquakes cause we're right by the fault line, but to be honest I'm not really worried about that right now.
>
> You see on the news, like today was it 46 people killed in a tornado? Then you always hear about flood warnings and stuff like that but I have been here 3 ½ years and nothing's happened to me since. So, what's another semester? So…No! I'm not really fearful.
>
> I'm not fearful. I mean if it happens, it happens.
>
> I've never really been in a tornado or a storm. I would say, like bad weather, I think I'm kinda unique in the fact that it doesn't really scare me.

> I'm not really scared of anything like that to be completely honest; not even fires or anything.

There was only one instance of a male student expressing fear and he did so only after saying he doesn't think about it much.

> I don't really think about it cause we get tornado warnings a lot and it's just like whatever, especially in the summer months. But, I mean, they're scary, and I've been in a really big one before, and it's terrifying.

Differences between males and females were most noticeable when expressing fear. While males went to great lengths to explain that they were not fearful, female students were much more likely to speak candidly about their fear. Also, most fear was expressed in relation to tornados. They only talked briefly about fear of floods and fear more generally.

Preparedness

We also examined students' preparedness for disasters. In our previous research (Lovekamp and Tate 2008), perceived self and university preparedness for tornados were significantly greater than for perceived self and university preparedness for earthquakes by both males and females ($F = 71.64$, $p = .000$), but there were no significant differences between men and women in perceived preparedness ($F = .033$, $p = .857$). Also, engaging in survival activities (such as and planning activities) was significantly greater than hazard mitigation for both males and females ($F = 82.34$, $p = .000$) but again, there was no significant difference between male and female students ($F = .411$, $p = .523$) (See Table 1 for complete list of preparedness items arranged by category).

Our qualitative focus groups support our previous findings on preparedness. Most students seem very complacent and do very little to prepare. Also, and there was no noticeable difference between males and females.

> I think it's basically luck whether or not you're gonna have a disaster or not and I think you could be as prepared as you want to be, you could have as much supplies as you want, but when the time comes, it's just whether or not you get, whether or not they get hit or not, so I think it's all based off of luck.

> It's kind of a matter of if you know how to remain calm in certain situations and not get overworked then you know how to better prepare yourself for things, cause the more you freak out about it, the more that its gonna be harder to deal with the situation when it comes.

Table 1: Disaster Preparedness Items

Category	Items
Survival Activities	Store water
	Store canned or dehydrated food
	Have working, battery operated radio
	Have first-aid kit or medical supplies
	Have working flashlight
	Learned First Aid & CPR
	Learned how to turn off gas, electricity, and water
	Secured hot water heater
Preparedness Planning	Have disaster insurance
	Discuss with others what to do
	Establish plans for what to do at your residence
Hazard Mitigation	Structural support or reinforcement of your home
	Rearrange contents of cupboards or storage cabinets
	Cupboard or storage cabinet latches
	Securing furniture like tall bookshelves to the wall

If students took any actions to prepare, they were basic survival activities such as storing water or food, having a flashlight, a first aid kit, and the occasional Snickers bar.

> I've got a blanket and some gloves and a hat. Did you know you could live a week off a Snickers bar? You can live a week off the sugar and the carbohydrates and all the [stuff] that's in a Snickers bar. You can live a week off a Snickers bar. I have a Snickers bar in the trunk of my car.

> I think knowledge is probably the best; knowledge in general about different disasters. I guess, if you really want to be prepared just learn as much as you can so when it happens, nothing surprises you. No matter what happens, it's not a shock and you can stay level headed.

Generally, students said that they do very little. We continued to ask students whether the university is prepared for disasters. The students identified that the university has Emergency Alert System tests and fire alarms, but could not identify other ways that the university is prepared. Some students did say that they "assumed" that resident assistants are told what to do and how to handle disaster situations. Overall, the general consensus was that the university is not prepared.

> They barely have those emergency buttons let alone something to go into if there's a tornado or whatever, flood. I don't think they're prepared at all. I'm sorry, that's horrible and I love this school, but I honestly don't think they're prepared.

Conversely, the few students who stated the university was prepared, using emergency notifications and Virginia Tech as evidence, said that there is not much else that the university really can do.

> I feel like yes, in comparison to what it was three years ago. Remember that Tuesday, it was the first Tuesday of the month [just a few weeks prior to the focus group] and you got like 20 emails about this is the emergency activation system? I just remember nothing like that ever was in effect, not any other year I've been here. I don't remember anything like that happening any other year. I feel like they've come leaps and bounds from where they were and that's why I feel more prepared.

Once again, students are not really concerned about preparedness, do not think that the university is very well prepared, and men and women do not differ in these views.

Union University

Just before the conclusion of each focus group, we showed students video footage of the Union University tornado in Jackson, Tennessee on February 5, 2008. After showing coverage of the Union University tornado, students in every focus group were amazed at the devastation and very surprised that no one was killed. They were very inquisitive about damage and the severity of the storms. We found that, particularly in the female focus groups, students said they were scared of something like that happening at their university and how horrifying the disaster was. For example, one female student said, "even though people took cover there were still people trapped and you can be killed from that so…I don't know…it's just chilling." Another female student said, "I'm more scared now and it shouldn't be taken lightly." Another female student expressed great concern because they live in residence halls similar to the ones destroyed at Union University, with many more students in the residence halls than Union University. Only one male student revised earlier comments by saying "I was wrong about the whole bullet proof thing".

We also found that while saying that this was an important issue for students and the university, many said you cannot prevent something like this from happening. One male student stated:

> I would like to revise what I said earlier…in that it's not that I don't think it can happen…it's that it's so big that it's…what could I have done to make that situation better? It just seems like something that you have to roll with the punches! It's so much bigger than anything I could have

> done. I don't know what I could have done to make myself safe in that situation other than the things I learned in first grade.

A female student said that she still does not imagine something happening to her while at school, we "have the same system that the school in Tennessee did, so everyone will probably be safe until they can at least figure things out afterwards." Overall, we found that after seeing the footage of the destruction, students were much more concerned about how the university was prepared and some, mostly women, changed their attitudes about the importance of disaster preparedness. They began to discuss how the university could be more prepared by launching awareness campaigns, making sure information is posted, and some even suggested that all students take a class on disaster awareness and preparedness as part of their new student orientation programs. Other students talked about their knowledge of how residence halls were prepared much more than when they were asked about preparedness earlier in the focus groups. This is best summed up by a female student in one of the focus groups who said:

> I don't like disasters. That's all I'd like to say. And, I just wish we were a little more prepared, even though, like I said, the buildings are still going to go. We don't want the people to go.

Discussion

We found that students are generally aware of the risks they face and few students had direct experience with disasters. We also found that expressing fear was more common among female students than males. Males often went out of their way to ensure that everyone knew they were not fearful. Females often expressed fear and commonly related this to their family and homes. Third, students indicated that they were not well prepared and seemed to adopt fatalistic attitudes about the importance of preparedness by saying that disasters will happen and there is nothing they can do. They also could not identify many ways in which the university was prepared. Finally, after seeing CNN footage of the devastation at Union University, students, particularly females, changed their views by stating that they believe this is an important issue for students, were much more concerned about university preparedness, started highlighting actions that the university could take to ensure that students were safeguarded, and expressed much higher levels of anxiety. Many of these same patterns, such as female students expressing more fear than males, were mirrored in earlier research by Lovekamp and Tate (2008). And, research shows that perceived risk and expressions of fear are often higher for women because of the social roles they occupy as emotion workers, nurturers and providers for children (Fothergill 1996; Fothergill 1999b; Honeycombe 1994; Wilson et al. 1998). We also do not know if or how students mirror American households. While

literature shows consistent gender divisions within typical, adult households, college students are a unique population, not disadvantaged and may not conform to these expectations. We recommend that additional research continue examining these gender issues and the unique vulnerabilities of college students.

Future research also must continue to examine the relationship between preparedness, behavior and personal responsibility. While our research shows that students do little to prepare and often adopt somewhat fatalistic attitudes about the importance of preparedness, we believe that this might be because as residents of the university, they think the university is responsible for protecting and taking care of them, similar to a surrogate parent or in loco parentis. And, according to the person-relative-to-event (PrE) theory (Mulilis, Duval, and Rombach 2001), they must feel that they have the resources and are personally responsible before they will take protective actions. Even though we did not ask students specifically about their understandings of responsibility, they often indirectly mentioned how they suspected that resident assistants and others on campus were trained to know what to do during a disaster.

As a policy recommendation, we encourage Universities to continue reviewing and enhancing their disaster preparedness education programs. In our study, the students were commonly unaware of university preparedness measures and could only identify the basic National Weather Service emergency notification system messages as an example. However, the university where the study took place has actively worked to enhance the emergency notification system by adding additional sirens for efficient campus coverage, staged "active shooter" drills since the Virginia Tech and Northern Illinois University campus shootings, and added additional emergency notification messages and alert texting for campus emergencies within the last three years. Also, the local American Red Cross office trained over 100 new students in first aid and CPR during freshman orientation at the beginning of the 2009-2010 academic year and another 75 at fall orientation in 2010. The university has also recently started a campus Community Emergency Response Team program and an American Red Cross student organization. These are all signs that the university is very well prepared, but the students are not aware of such measures. Second, we recommend that campus educational disaster programs be implemented and student specific. The students seemed to appreciate that the example was from another campus like theirs. As research shows, increasing students' knowledge about hazards will increase their adjustment to the hazard (Lindell and Whitney 2000). Therefore, we need to use examples that resonate with them. And, while many universities are creating campus preparedness and emergency response groups, changing policy and continuing to enhance overall mitigation, we will continue to be ill prepared if we do not examine student needs and build on their existing knowledge, capacities and resources.

Finally, we recognize that our sample is limited in its generalizability and may not reflect the entire campus community—let alone all students nationally. Nonetheless, we

believe our research adds to existing knowledge of college students' views of disasters and some possible differences in gender. Also, universities are not simply appendages to society. While often being more homogeneous than the rest of the general population, students are a unique group of interest. Even though they are often not disadvantaged or vulnerable to the same degree as a female headed household below the poverty line, they are transient and concentrate risk in temporary or long-term, high-density gathering places. They also may not be fully aware of the risks and seem to do little to prepare. Also, universities assume a different role regarding students than the government does for its citizens. It is fairly common for the government to inform citizens to be prepared to survive three full days before help will arrive. Universities are often gathering places that reflect the risks of the region and uniquely concentrate the risks by creating temporary or long-term high-density gatherings of people. Also, we suspect that universities take on the 'parenting' role of preparing and safeguarding the students. Because of this, it is very important to continue examining college student awareness and preparedness involving larger numbers of students at multiple universities with different disaster risks and demographic diversity, and talk to university safety officers or emergency personnel to examine current levels of preparedness at an administrative level. If we are going to be prepared and respond effectively we need to continue examining unique factors associated with college student vulnerability and to ensure that students and universities are both well prepared.

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