**ABSTRACT**

The objective of this study was to examine previous disaster impact, threat perception, self-efficacy, and sex as predictors of university employees' preparedness for natural disasters and incidents of mass violence. A cross-sectional survey was conducted with faculty and staff members at a medium-sized university located in the southern United States. The sample consisted of faculty (33.7%), non-academic staff (43.9%), and students (22.4%). The present findings for incidents of mass violence clarify the correlational discrepancy and corroborate Dillon et al.'s mediation (2014), in accord with EPPM theory; the role of perceived susceptibility as a mediator supports the theoretical framework of emergency management and is related to engagement in preparedness behaviors. Taken together, the models for natural disasters and incidents of mass violence suggest that individuals are more likely to prepare themselves for disasters when they have greater threat perception and greater self-efficacy. Therefore, it is recommended that institutions, organizations, and individuals engaging in disaster preparedness efforts should neither use scare tactics nor rely on that both threat messages and self-efficacy are related to engagement in preparedness behavior. Taken together, the models for natural disasters and incidents of mass violence suggest that individuals are more likely to prepare themselves for disasters when they have greater threat perception and greater self-efficacy.

**INTRODUCTION**

Exploratory studies have identified factors that sometimes predict disaster preparedness, including disaster experience, threat perceptions, and self-efficacy. However, the relationships between these factors and preparedness has been mixed in the literature, with some studies reaching contradictory conclusions (e.g. Dillon et al., 2014; Kohn et al., 2012; Wachinger et al., 2012). Congruent with these identified preparedness factors, the Extended Parallel Process Model (EPPM; Witte, 1998) has been proposed as a theoretical model for disaster preparedness, although it has yet to be explicitly tested. The objective of this study was to examine the impact of disaster experience, threat perception, and self-efficacy as predictors of university employees' preparedness for natural disasters and incidents of mass violence.

A moderated mediation model was hypothesized for predicting natural disaster preparedness behaviors and mass violence preparedness behaviors. The hypothesized model had the following components:

1. Previous experience with natural disasters will predict greater preparedness behaviors.
2. The relationship between natural disasters experienced and preparedness for natural disasters will be mediated by perceived susceptibility of natural disasters.
3. Sex will moderate the relationship between disaster experience and perceived susceptibility, with women reporting higher perceived susceptibility to natural disasters.
4. This mediation will be moderated by impact of previous disaster experience with greater impact predicting greater natural disaster preparedness.
5. This moderation will be moderated by self-efficacy for natural disasters, with greater self-efficacy predicting greater natural disaster preparedness.

The same moderated mediation model was hypothesized for incidents of mass violence.

**DISASTER EXPERIENCE**

**SUM SCORE OF NATURAL DISASTERS:**

- 1. Tornado
- 2. Hurricane
- 3. Earthquake
- 4. Severe thunderstorm
- 5. Flood
- 6. Blizzard/snow storm
- 7. Ice storm
- 8. Bomb threat
- 9. Natural disaster excluding terror attacks
- 10. Terrorist attack
- Other

**DISASTER IMPACT**

**SUM SCORE OF NATURAL DISASTERS:**

- 1. Saw others injured or killed
- 2. Got injured yourself
- 3. Felt a direct threat to your life
- 4. Provided First Aid
- 5. Lost a significant amount of material possessions
- 6. Could not get in touch with other family members
- 7. Could not get to a store for three or more days
- 8. Lost electricity for three or more days
- 9. Were forced to leave your community or neighborhood due to an evacuation order
- 10. Had to leave home for three or more days
- 11. Had to leave work/school

**RESULTS**

For natural disasters (Fig. 1), a greater variety of disasters experienced predicted higher perceived susceptibility to natural disasters. Sex also had a direct effect on perceived susceptibility, with women reporting higher perceived susceptibility to incidents of mass violence than men. However, the indirect effect of sex was not statistically significant, meaning that sex did not significantly moderate the effect of the experience on perceived susceptibility. The direct effect of disaster experience on preparedness behavior was not statistically significant. Furthermore, a bias-corrected bootstrap confidence interval for the indirect effect of disaster experience on preparedness behavior remained above zero, thus, experience did not appear to have a direct effect on preparedness behavior, nor did perceived susceptibility mediate this effect. However, there was a significant direct effect of disaster impact on preparedness behaviors, with higher impact predicting greater preparedness behavior. Similarly, perceived susceptibility had a significant direct effect on preparedness behavior, with higher self-efficacy predicting greater preparedness behavior. Beyond the simple effects of self-efficacy and disaster impact on preparedness behavior, there was an interaction effect between self-efficacy and disaster impact. In other words, self-efficacy moderated the effect of disaster experience on preparedness behavior.

**MEASURES**

**PERCEIVED SUSCEPTIBILITY TO DISASTERS**

Mean score for natural disasters (7 items), for incidents of mass violence (3 items)

**SELF-EFFICACY FOR DISASTERS**

Mean score for questions 1 & 2 for natural disasters (14 items), for mass violence (6 items)

**PREPAREDNESS BEHAVIORS**

Natural disaster sum score: 1-5

**DISCUSSION**

Disaster experience, perceived susceptibility, and self-efficacy are sometimes correlated with preparedness behavior, but this is not always the case (Kohn et al., 2012; Wachinger et al., 2012). The present findings for incidents of mass violence clarify the correlational discrepancy and corroborate Dillon et al.’s mediation (2014), in accord with EPPM theory; the role of perceived susceptibility as a mediator supports the theoretical framework of emergency management and is related to engagement in preparedness behavior. Taken together, the models for natural disasters and incidents of mass violence suggest that individuals are more likely to prepare themselves for disasters when they have greater threat perception and greater self-efficacy.

Therefore, it is recommended that institutions, organizations, and individuals engaging in disaster preparedness efforts should neither use scare tactics nor rely on that both threat messages and self-efficacy are related to engagement in preparedness behavior. Taken together, the models for natural disasters and incidents of mass violence suggest that individuals are more likely to prepare themselves for disasters when they have greater threat perception and greater self-efficacy.

Participants (N = 410) were employees at a medium-sized university located in the southern United States. The sample consisted of faculty (53.7%, n = 138), academic staff (22.4%, n = 92), and non-academic staff (4%) (n = 8). Overall, the sample was reportedly 84% White – Non-Hispanic (n = 343), 7% Black/African American (n = 27), 4% Asian/American Indian (n = 15), 2% Hispanic/Latino (n = 7), and 1% Multi-racial (n = 6). 0.5% Native American Indian (n = 2), and 2% other race or ethnicity (n = 9). Women comprised 66% of the sample (n = 265) and men comprised 35% (n = 145). University employees who reported their age (n = 193) ranged in age from 21 to 70 years old (M = 42.8, SD = 11.7). They had been employed at the university from 1 to 42 years (M = 8.9, SD = 8.3).

**CONCLUSION**

The study found that disaster experience, perceived susceptibility, and self-efficacy were sometimes correlated with preparedness behavior, but this is not always the case (Kohn et al., 2012; Wachinger et al., 2012). The present findings for incidents of mass violence clarify the correlational discrepancy and corroborate Dillon et al.’s mediation (2014), in accord with EPPM theory; the role of perceived susceptibility as a mediator supports the theoretical framework of emergency management and is related to engagement in preparedness behavior. Taken together, the models for natural disasters and incidents of mass violence suggest that individuals are more likely to prepare themselves for disasters when they have greater threat perception and greater self-efficacy.

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