

Appendix

Table A1. Description of Variables Tested in Structural Equation Modeling

| Variable | Description | Variable Type |
|---|---|---------------|
| <u>Dependent Variable</u> | | |
| Evacuated | = 1 if evacuated; = 0 if stayed | Binary |
| <u>Independent Variable</u> | | |
| Transportation insecurity | Mean value of responses to the following items: You felt stuck at home due to transportation problems You had to reschedule an appointment due to transportation problems You skipped going somewhere due to transportation problems You arrived late to somewhere due to transportation problems You worried about inconveniencing family, friends, or neighbors because you needed help with transportation You had difficulties playing transportation-related expenses (e.g., the cost of gasoline or public transportation) | Numeric |
| Food insecurity | Mean value of responses to the following items: Your family's food didn't last, and you didn't have money to get more Your family could not afford to eat balanced meals You or your family cut the size of your meals or skipped meals because there wasn't enough money for food You or your family ate less than you felt you should because there wasn't enough money for food You or your family were hungry but didn't eat because there wasn't enough money for food | Numeric |
| Evacuation perception | Obtained from a factor analysis | Numeric |
| Hurricane perception | Obtained from a factor analysis | Numeric |
| Risk perceptions and assessments: <i>Hazard-related concerns, Resource-related concerns, Operation-related concerns</i> | The three factors were obtained from a factor analysis based on the following statements: - You or your family would be injured by the storm (personal injury) - Your property would be damaged by the storm (property damage) - Local healthcare and pharmacy would be out of service (medical disruptions) - Local basic services (water, electric power, telecommunications, etc.) would be out of service (infrastructure disruptions) - There would be shortages of local food supply (food service disruptions) - You would not be able to afford food and other essential goods (expenses) - You would have difficulties getting around due to a lack of convenient transportation options (transportation barriers) - You would be involved in a traffic incident (traffic incidents) | Numeric |
| Increase in risk perceptions | Differences between pre-hurricane concerns and risk perceptions for Hurricane Idalia in terms of the three concern types | Numeric |
| Female | = 1 if female; = 0 others, including Males, Non-binary / third gender and Prefer not to say | Binary |
| White | = 1 if white; = 0 others, including Black or African American, American Indian or Alaska Native, Asian or Pacific Islander and Others | Binary |

| | | |
|--------------------------|--|--------|
| Married | = 1 if married; = 0 others, including Single, Divorced and Widowed | Binary |
| Have children | = 1 if household has children (<18 years old); = 0 others | Binary |
| Have senior | = 1 if household has seniors (>65 years old); = 0 others | Binary |
| Have car | = 1 if household has car(s); = 0 if household has no car | Binary |
| Medical condition | = 1 if household have any members who needed special medical assistance; = 0 others | Binary |
| Disability | = 1 if household includes someone with a disability; = 0 others | Binary |
| Bachelor degree | = 1 if highest level of education are Bachelor's degree or Graduate degree; = 0 others, including Some high school, High school graduate/GED and Some college/vocational school | Binary |
| Middle Income | = 1 if income is \$35,000-\$44,999, \$45,000-\$54,999, \$55,000-\$64,999 and \$65,000-\$74,999; = 0 others, including < \$21,499, \$21,500-\$34,999, \$75,000-\$99,999 and > \$100,000 | Binary |
| High Income | = 1 if income is \$75,000-\$99,999 and > \$100,000; = 0 others, including < \$21,499, \$21,500-\$34,999, \$35,000-\$44,999, \$45,000-\$54,999, \$55,000-\$64,999 and \$65,000-\$74,999 | Binary |
| Employed | = 1 if Employed; = 0 others, including Unemployed but was seeking a job, Unemployed, stayed at home, and/or relied on relatives, Unable to work due to disabilities, Retired and Other | Binary |
| Mobile home | = 1 if Mobile or manufactured home; = 0 others, including Detached single-family home, Multi-family home and Other | Binary |
| Years of Residence, 1-10 | = 1 if residence 1-10 year; = 0 others, including <1 year, 11-20 years, 21-30 years, and more than 31 years | Binary |
| Years of Residence, >11 | = 1 if residence more than 11 year; = 0 others, including <1 year and 1-10 years | Binary |

Table A2. Descriptive Statistics of Survey Respondents

| Variable | Description | Percentage | Mean |
|-------------------------------------|--|------------|------|
| <i>Dependent Variable</i> | | | |
| Evacuation Decision | Stay | 76.76 | |
| | Evacuate | 23.24 | |
| <i>Independent Variables</i> | | | |
| Residence Duration | Less Than 5 Years | 34.86 | |
| | 5-10 Years | 19.88 | |
| | 11-20 Years | 18.35 | |
| | 21-30 Years | 16.21 | |
| | More Than 31 Years | 10.70 | |
| Structure of Residence | Detached Single Family | 49.24 | |
| | Multi-Family | 11.92 | |
| | Mobile or Manufactured Home | 34.56 | |
| | Others | 4.28 | |
| Adult | Number of Adults in the Household 18 to 64 Years Old | | 1.88 |
| | Number of Adults in the Household 65+ Years | | 0.47 |
| Disability or Medical Condition | No Household Members with a Disability or Medical Condition who cannot travel alone | 90.21 | |
| | Have Household Member with a Disability or a Medical Condition who cannot travel alone | 9.79 | |
| Education Level | High School or less | 29.97 | |
| | Some college/vocational school | 37.00 | |
| | Bachelor's Degree | 22.32 | |
| | Graduate Degree | 10.70 | |
| Income | Less than \$24,999 | 18.65 | |
| | \$25,000-\$34,999 | 18.35 | |
| | \$35,000-\$44,999 | 10.09 | |
| | \$45,000-\$54,999 | 13.46 | |
| | \$55,000-\$64,999 | 12.54 | |
| | \$65,000-\$74,999 | 6.42 | |
| | \$75,000-\$99,999 | 11.01 | |
| | \$100,000 or More | 9.48 | |
| Female | Male | 26.61 | |
| | Female | 73.09 | |
| | Other | 0.30 | |
| Age | Current Age | | 48.1 |
| Race | White | 67.28 | |
| | Other | 32.72 | |

Note. N=327. All variables are about the respondent or their household.

Table A3. Tests of Moderating Effects

| Source | Model I | | | Model II | | | Model III | | | Model IV | | |
|---|---------|-------------|---------|----------|-------------|---------|-----------|-------------|----------|----------|-------------|---------|
| | df | Mean Square | F | df | Mean Square | F | df | Mean Square | F | df | Mean Square | F |
| Corrected Model | 10 | .56 | 3.39*** | 10 | .73 | 4.53*** | 8 | .98 | 6.19*** | 6 | 1.09 | 6.73*** |
| Intercept | 1 | .02 | .14 | 1 | .02 | .15 | 1 | .06 | .38 | 1 | .10 | .62 |
| Fixed Factors | | | | | | | | | | | | |
| Married | 1 | .56 | 3.40 | 1 | .66 | 4.11* | 1 | .63 | 3.99* | 1 | .51 | 3.15 |
| Household Size | 1 | 1.49 | 9.09** | 1 | 1.30 | 8.08** | 1 | 1.60 | 10.10** | 1 | 1.47 | 9.11** |
| Experience | 1 | .02 | .14 | 1 | .40 | 2.47 | 1 | .00 | .03 | 1 | 1.25 | 7.69** |
| Operation Concerns | 1 | .61 | 3.72 | 1 | .04 | .25 | 1 | .78 | 4.93* | 1 | .15 | .94 |
| Tested Effects | | | | | | | | | | | | |
| Hazard Concern Increase * Experience | 1 | .03 | .21 | | | | | | | | | |
| Hazard Concern Increase * Operation Concerns | 1 | .02 | .12 | | | | | | | | | |
| Resource Concern Increase * Experience | 1 | .19 | 1.16 | | | | | | | | | |
| Resource Concern Increase * Operation Concerns | 1 | .06 | .39 | | | | | | | | | |
| Operation Concern Increase * Experience | 1 | .00 | .02 | | | | | | | | | |
| Operation Concern Increase * Operation Concerns | 1 | .02 | .11 | | | | | | | | | |
| Transportation Insecurity * Experience | | | | 1 | .04 | .27 | | | | | | |
| Transportation Insecurity * Operation Concerns | | | | 1 | .15 | .95 | | | | | | |
| Food Insecurity * Experience | | | | 1 | .02 | .12 | | | | | | |
| Food Insecurity * Operation Concerns | | | | 1 | .06 | .35 | | | | | | |
| Medical Service Insecurity * Experience | | | | 1 | .02 | .10 | | | | | | |
| Medical Service Insecurity * Operation Concerns | | | | 1 | .25 | 1.53 | | | | | | |
| Grocery Habits * Experience | | | | | | | 1 | .22 | 1.38 | | | |
| Grocery Habits * Operation Concerns | | | | | | | 1 | .12 | .78 | | | |
| Medical Habits * Experience | | | | | | | 1 | 1.84 | 11.58*** | | | |
| Medical Habits * Operation Concerns | | | | | | | 1 | 1.14 | 7.19** | | | |
| Self-Efficacy * Experience | | | | | | | | | | 1 | .68 | 4.20* |
| Self-Efficacy * Operation Concerns | | | | | | | | | | 1 | .48 | 2.95 |
| Error | 326 | .16 | | 326 | .16 | | 328 | .16 | | 330 | .16 | |
| Total | 337 | | | 337 | | | 337 | | | 337 | | |
| Corrected Total | 336 | | | 336 | | | 336 | | | 336 | | |

* $p < .05$. ** $p < .01$. *** $p < .001$.