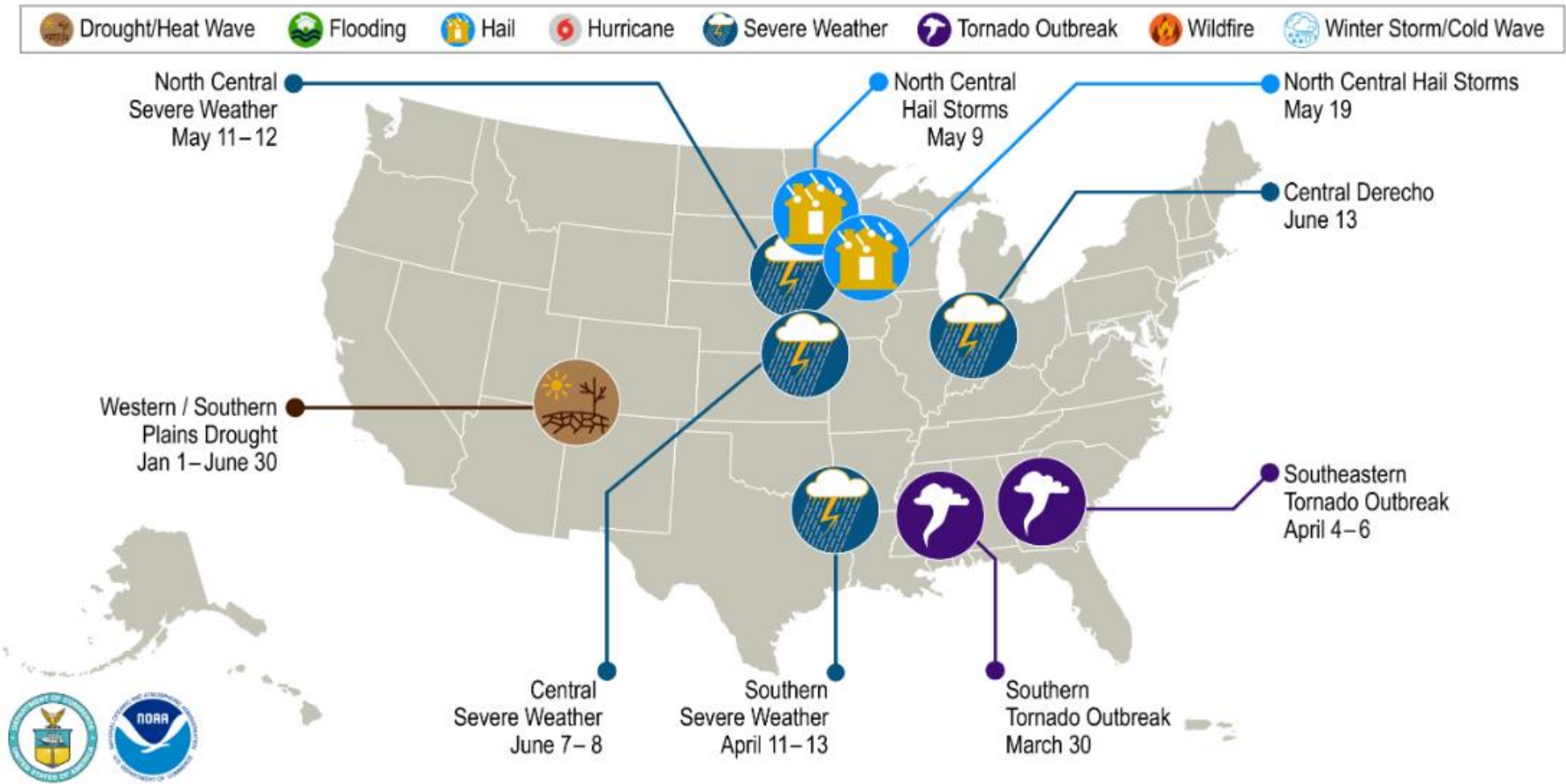


YTD - 8 OF THE 9 BILLION-DOLLAR EVENTS ARE SCS RELATED

U.S. 2022 Billion-Dollar Weather and Climate Disasters



This map denotes the approximate location for each of the 9 separate billion-dollar weather and climate disasters that impacted the United States January – June of 2022.

<https://www.ncei.noaa.gov/access/billions/>

LEARNING OBJECTIVES – APPLY WHAT YOU SEE & LEARN HERE BACK AT YOUR DEPARTMENT

- Understand SCS and Wildfire property loss drivers
- Identify and begin to develop solutions to key regulatory issues on these perils – ***complaints, fraud, property coverage, policyholder communication, resilience***
- Identify options for property mitigation, integrating the latest science

AGENDA

■ Day 1 – SCS Focused

- Classroom – Peril science
- Classroom – Regulatory issues baseline
- Lab
 - Break for lunch
- Classroom – Peril & Mitigation science
- Lab
- Classroom – Regulatory Issues Discussion

■ Day 2 – Wildfire Focused

- Lab (*early start to our day)
 - Break for breakfast
- Classroom – Peril Science
- Classroom – Communication & Risk Awareness tools



LOCATE RESOURCES FOR RISK AWARENESS, MITIGATION, & ENGAGEMENT WITH POLICYHOLDERS ON RISK REDUCTION

LEVERAGING CIPR



CIPR STATE RESILIENCY MAP

For more information, please visit our [NAIC and Federal Resources on Resiliency, Disaster Preparedness, and Response](#)

Click on a state or territory below to learn what disaster resilience information is available on their insurance department website.



https://content.naic.org/cipr_resiliency_map.htm

SUMMARY OF EXISTING STATE DOI RISK AWARENESS & OUTREACH/MESSAGING - SCS

- SCS Data collected from 19 states
 - Hail
 - Insurance Coverage – 13 of 19
 - Mitigation Information & Programs – 2 of 19
 - Roof Information – 3 of 19
 - Wind/Tornadoes
 - Insurance Coverage – 16 of 19
 - Mitigation Information & Programs – 4 of 19
 - Roof Information – 4 of 19

SUMMARY OF EXISTING STATE DOI RISK AWARENESS & OUTREACH/MESSAGING - WILDFIRE

I. Alaska - Oregon

	Alaska	Arizona	California	Colorado	Idaho	Montana	Nevada	New Mexico	Oregon
WILDFIRE PREPAREDNESS									
Home Inventory	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>
"Go bag"/Emergency Kit				<u>X</u>				<u>X</u>	<u>X</u>
Mitigation: Wildfire Prevention/Defensible Space	<u>X</u>	<u>X</u>					<u>X</u>	<u>X</u>	<u>X</u>
Checking Insurance Coverage	<u>X</u>	<u>X</u>	<u>X</u>		<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>
Flooding After a Wildfire		<u>X</u>	<u>X</u>	<u>X</u>			<u>X</u>		
Evacuation Planning			<u>X</u>					<u>X</u>	
POST-WILDFIRE									
Filing Insurance Claims	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>
Home Repairs/Avoiding Home Repair Scams		<u>X</u>	<u>X</u>				<u>X</u>		<u>X</u>
Post-Disaster Claims Guide for consumers (NAIC Publication)	<u>X</u>		<u>X</u>	<u>X</u>	<u>X</u>				



STATE DOI DISCUSSION

HOW DO STATE DOI'S THINK ABOUT MESSAGING TO POLICYHOLDERS?





MOVING THE NEEDLE ON CLOSING THE PROTECTION GAP

ADDRESSING THROUGH RESEARCH



APPLICATION OF WILDFIRE MITIGATION TO INSURED PROPERTY EXPOSURE

Demonstrate ability of CAT models to reflect structure-specific and community level mitigation.

- ❑ Summary of IBHS & NFPA Firewise USA recommendations
- ❑ These mitigation benefits modeled for 3 sites in California, Oregon, Colorado
- ❑ A simple cost-benefit analysis of these mitigation features is examined and documented.



KEY RESULTS – THE HOME HARDENING ECONOMICS CAN WORK

- **Modeled wildfire risk in 4 of 6 CA & OR communities is significant – i.e., a substantial portion or existing HO3 premiums**
 - In California sites, the estimated cat model wildfire risk is 20% to 300% of 2017 average premium of \$1643
- **Opportunity to significantly reduce this risk exists through structural and vegetation mitigation efforts**
 - Moving from a poorly built wildfire resistant structure to a well-built one:
 - Structural modifications reduce wildfire average annual loss up to \$3,307 /Yr.
 - Structural PLUS vegetation modifications reduce average annual loss up to \$4,529 /Yr.
 - ***Risk reduction is shown to be economically effective in CA & OR over various timeframes given cost assumptions => How to encourage adoption?***



IDENTIFYING PROMISING MESSAGES TO INCREASE HURRICANE MITIGATION AMONG COASTAL HOMEOWNERS IN THE UNITED STATES

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MITIGATION CAN HELP PREVENT LOSSES




©Insurance Institute for Business & Home Safety

THE RETURNS TO MITIGATION INVESTMENT HAVE CONSISTENTLY SHOWN TO BE ECONOMICALLY EFFECTIVE – **YET A PROTECTION GAP PERSISTS**


National Institute of BUILDING SCIENCES™		ADOPT CODE	ABOVE CODE	BUILDING RETROFIT	LIFELINE RETROFIT	FEDERAL GRANTS
Overall Benefit-Cost Ratio		11:1	4:1	4:1	4:1	6:1
Cost (\$ billion)		\$1_{/year}	\$4_{/year}	\$520	\$0.6	\$27
Benefit (\$ billion)		\$13_{/year}	\$16_{/year}	\$2200	\$2.5	\$160
 Riverine Flood		6:1	5:1	6:1	8:1	7:1
 Hurricane Surge		not applicable	7:1	not applicable	not applicable	not applicable
 Wind		10:1	5:1	6:1	7:1	5:1
 Earthquake		12:1	4:1	13:1	3:1	3:1
 Wildland-Urban Interface Fire		not applicable	4:1	2:1	not applicable	3:1

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TABLE 1. Nationwide average benefit-cost ratio by hazard and mitigation measure. BCRs can vary geographically and can be much higher in some places. Find more details in the report.



**How can we persuade
homeowners to mitigate by
retrofitting their homes?**



RESEARCH AGENDA

Study 1: Elicitation survey

What are homeowners'
beliefs about retrofitting
their homes?

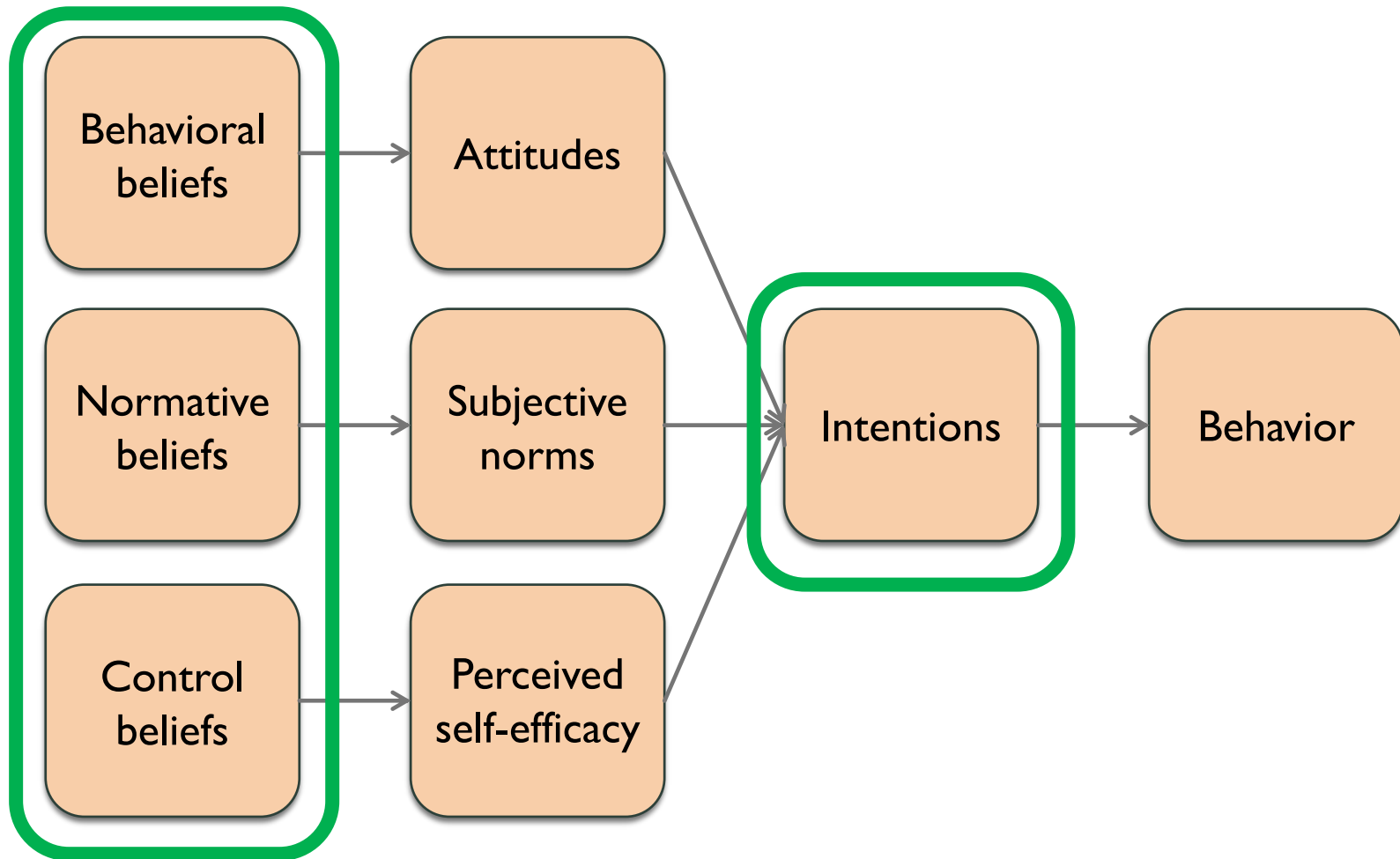
Study 2: Main survey

What beliefs about
retrofitting **are promising**
for targeted persuasive
messages?

Study 3: Experimental study

Do messages with
promising beliefs
influence intentions
to retrofit?

THEORY OF PLANNED BEHAVIOR

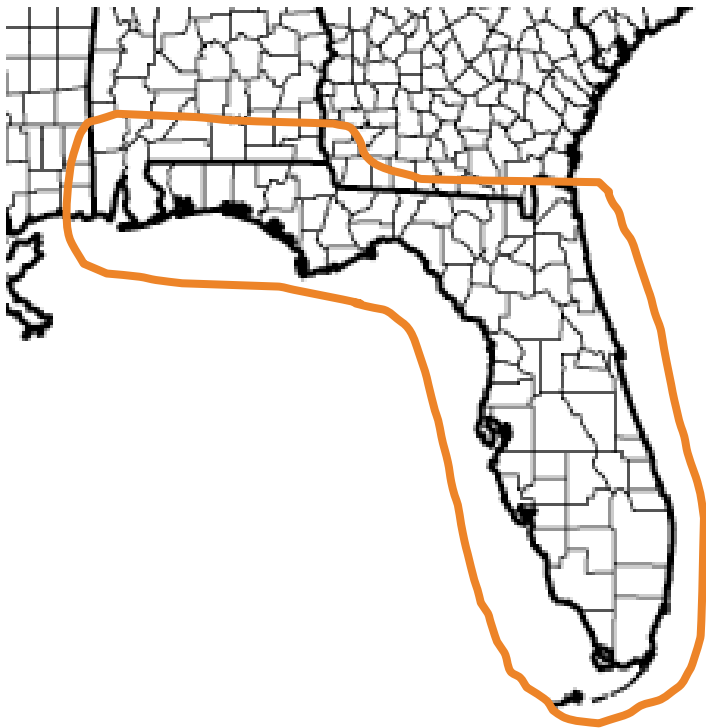


HIGH WIND RESISTANT ROOF

One way to protect your home against severe weather is by replacing your roof with a roofing system that resists high wind weather events, like hurricanes and tropical storms. A high wind resistant roof may use heavier shingles, metal roof panels, or concrete tiles.



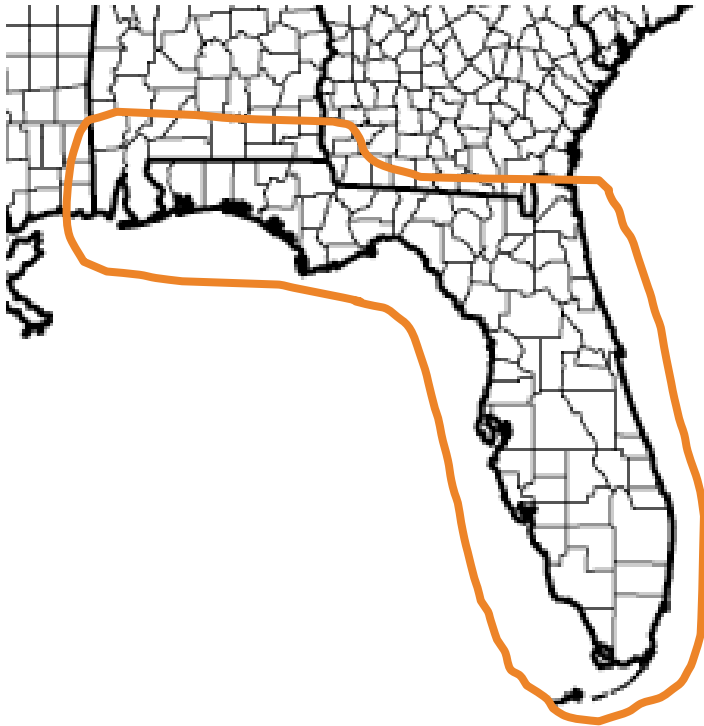
STUDY I: ELICITATION SURVEY



- 10-minute online survey
- Coastal homeowners in Alabama and Florida
- Open-ended beliefs about retrofitting
 - Behavioral
 - Normative
 - Control



STUDY 2: MAIN SURVEY



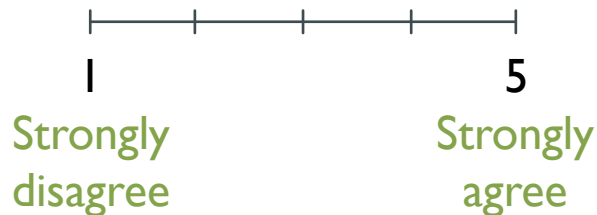
- 15-minute online survey
- Coastal homeowners in Alabama and Florida
- Belief statements about retrofitting
- Intention to retrofit in the next year



BELIEFS AND INTENTION

My family is likely to install a high wind resistant roof.

If I install a high wind resistant roof, my family will be protected.



How likely is it that you will install a high wind resistant roof in the next 12 months?



SOME PROMISING BELIEFS

❑ Family

- ❑ My parents are likely to install a high wind resistant roof

❑ Community

- ❑ My neighbors are likely to install a high wind resistant roof

❑ Protection – family

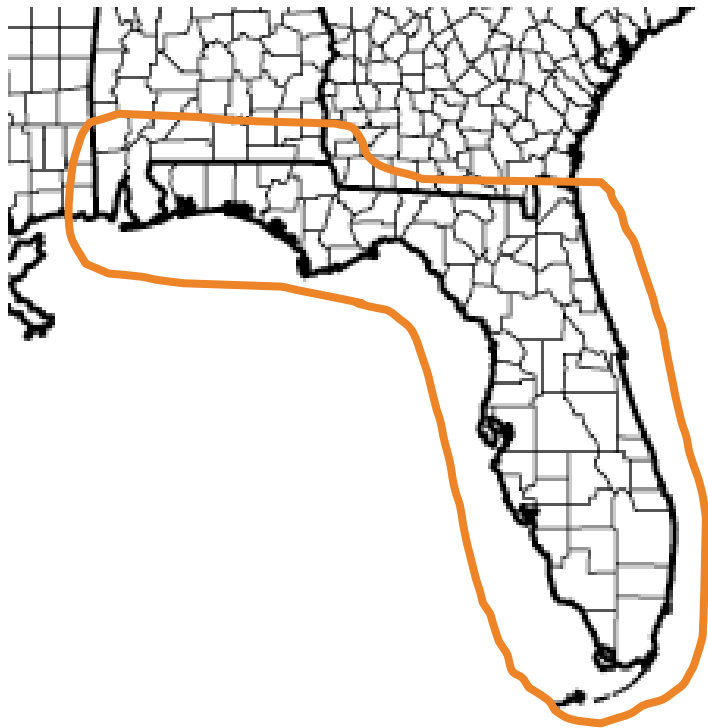
- ❑ If I install a high wind resistant roof, my family will be protected

❑ Protection – property

- ❑ If I install a high wind resistant roof, my belongings will be protected



STUDY 3A: PILOT EXPERIMENT



- 10-minute online experiment
- Coastal homeowners in Alabama and Florida
- Random assignment to treatment (targeted messages) or control
- Belief endorsement



TREATMENT – FAMILY



Susan, 68, installed a high wind resistant roof

A lot of residents in coastal areas say that their family wants to install a high wind resistant roof. After a few years of living in her home, Susan decided to install a high wind resistant roof. “I understood how important it was to my family that we have a stronger roof. After learning this, it became clear that I had to make this modification to my house.”

My family is likely to
install a high wind
resistant roof.



TREATMENT – COMMUNITY



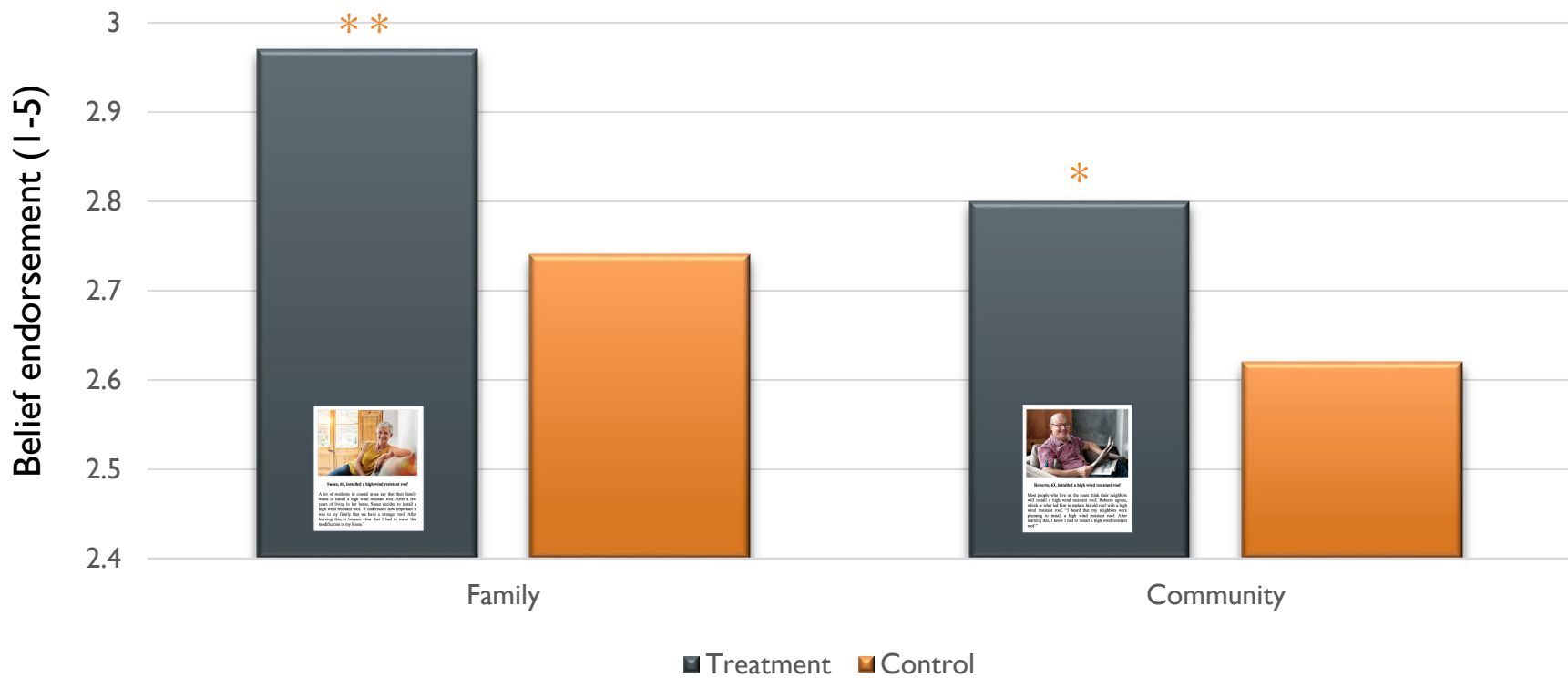
Roberto, 63, installed a high wind resistant roof

Most people who live on the coast think their neighbors will install a high wind resistant roof. Roberto agrees, which is what led him to replace his old roof with a high wind resistant roof. “I heard that my neighbors were planning to install a high wind resistant roof. After learning this, I knew I had to install a high wind resistant roof.”

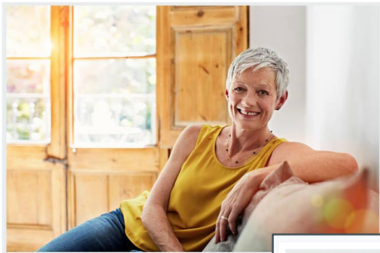
My neighbors are likely to install a high wind resistant roof.



MESSAGES INFLUENCE BELIEFS

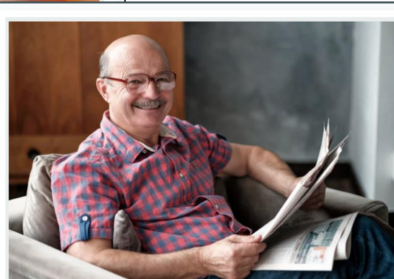


STUDY 3B: MAIN EXPERIMENT



Susan, 68, installed a high wind resistant roof

A lot of residents in coastal areas say they want to install a high wind resistant roof. After 30 years of living in her home, Susan decided to install a high wind resistant roof. "I understood that it was to my family that we have a strong investment. After learning this, it became clear that I had to make a modification to my house."



Roberto, 63, installed a high wind resistant roof

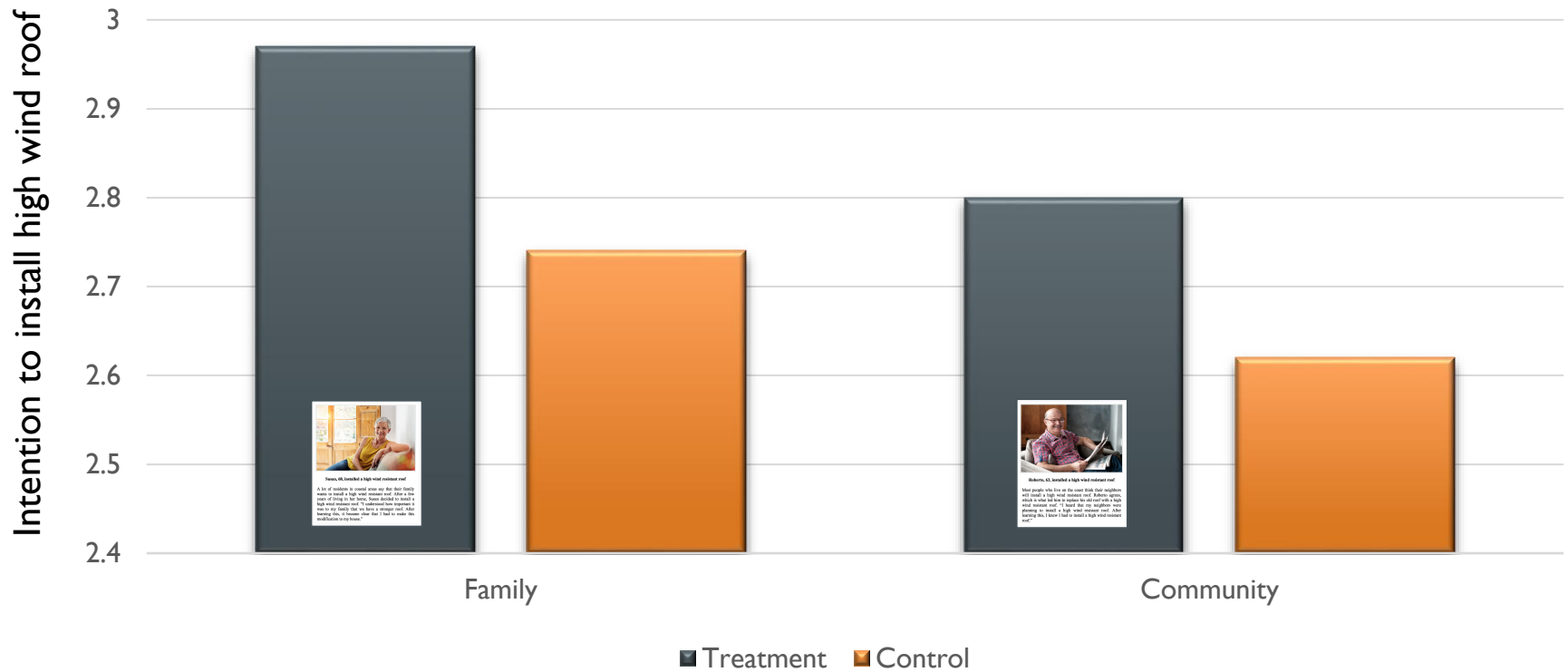
Most people who live on the coast think their neighbors will install a high wind resistant roof. Roberto agrees, which is what led him to replace his old roof with a high wind resistant roof. "I heard that my neighbors were planning to install a high wind resistant roof. After learning this, I knew I had to install a high wind resistant roof."



How likely is it that you will install a high wind resistant roof in the next 12 months?



ANTICIPATED EFFECTS: MESSAGE EXPOSURE WILL INCREASE INTENTION TO RETROFIT



MESSAGES WILL INCREASE TARGETED BELIEFS, THEREBY INFLUENCING INTENTION TO RETROFIT



My family is likely to install a high wind resistant roof.



How likely is it that you will install a high wind resistant roof in the next 12 months?

MESSAGE EXPOSURE

TARGETED BELIEF

INTENTION TO RETROFIT



QUESTIONS?

*We gratefully acknowledge funding for this research from the
University of Alabama and the Florida Division of Emergency Management*