Supplement Table 1. Attrition analysis: Logistic regression model predicting participation in second survey wave.

	b	SE	Odds Ratio	P-Value
Race	0.14	0.13	1.15	0.27
Gender	0.03	0.10	1.03	0.75
Age	0.24	0.03	1.27	0.00
Education	0.00	0.05	1.00	0.99
Income	-0.04	0.04	0.96	0.23
Hispanic	0.40	0.17	1.50	0.02
Political ideology	-0.02	0.05	0.98	0.71
Health status	-0.05	0.05	0.96	0.39
Cognitive Appraisal	0.08	0.05	1.08	0.11
Emotional Appraisal	0.02	0.04	1.02	0.65
Perceived harm to self (pre-test)	-0.05	0.07	0.95	0.41
Constant	-0.52	0.39	0.59	0.18

Supplement Table 2. Reliability scores of cognitive and emotional message appraisal measures for different climate change health topics.

Topic	Cognitive Appraisals Cronbach's alpha (# of items)	Emotional Appraisals Cronbach's alpha (# of items)
Extreme heat	.86 ($n = 4$)	.93 ($n = 4$)
Poor air quality	.86 ($n = 4$)	.93 ($n = 4$)
Extreme weather	.86 ($n = 4$)	.93 ($n = 4$)
Diseases spread by insects, ticks, and rodents	.85 ($n = 4$)	.93 ($n = 4$)
Contaminated water	.86 ($n = 4$)	.94 ($n = 4$)
Contaminated food	.88 ($n = 4$)	.93 ($n = 4$)
Hunger and malnutrition	.85 ($n = 4$)	.94 ($n = 4$)
Mental health	.84 ($n = 4$)	.94 ($n = 4$)
All topics together	.98 ($n = 32$)	.99 ($n = 32$)

Supplement Table 3. Bivariate correlations with descriptive statistics among key variables of interest (N = 1,104).

Variables	*M*	*SD*	1	2	3	4	5	6
1. Political ideology	3.14	1.18	1					
2. Health status	3.39	0.99	.03	1				
3. Cognitive responses	5.35	1.30	-.25**	-.12**	1			
4. Emotional responses	4.08	1.68	-.25**	-.08**	.59**	1		
5. Perceived harm to self	2.89	0.95	-.31**	.05	.52**	.58**	1	
6. Policy support	3.81	1.11	-.37**	-.04	.61**	.54**	.59**	1

Note. Correlation is significant at the 0.01 level (two-tailed). **$p < .01$. For political ideology and health status, lower scores mean more liberal and poorer health status and higher scores mean more conservative and better health status.

Supplement Table 4. Indirect effects of political ideology (n = 1,015) and health status (n = 1,014) on

immediate posttest perceived harm to self through two mediators.

DV	Mediators	**IV: Political Ideology → Mediators** b(SE)	**Mediators → DV** b(SE)	**Specific Indirect Effects IV→ Mediators → DV** ab(SE)
Perceived Harm to Self	Cognitive Responses	-.15 (.03)***	.19 (.02)***	-.03 (.01)* [-.04, -.02]
	Emotional Responses	-.11 (.04)**	.13 (.01)***	-.02 (.01)* [-.03, -.005]
DV	Mediators	**IV: Health Status → Mediators** b(SE)	**Mediators → DV** b(SE)	**Specific Indirect Effects IV→ Mediators → DV** ab(SE)
Perceived Harm to Self	Cognitive Responses	-.12 (.04)**	.19 (.02)***	-.02 (.01)* [-.04, -.01]
	Emotional Responses	-.17 (.05)***	.13 (.01)***	-.02 (.01)* [-.04, -.01]

Note. Confidence intervals were reported in brackets. Models controlled for age, gender, education, income, race, ethnicity. The model also included baseline perceived harm to self as a control. For the emotional response mediator, higher scores indicated stronger negative responses. *p < .05, **p < .01, ***p < .001

Supplement Table 5. Pre/post difference in perceived harm to self by levels of political ideology.

		Pretest	Immediate Posttest	Pre-post Mean Difference	Cohen's d
Very liberal	M (SD)	3.25 (0.85)	3.34 (0.75)	0.09	0.15
	N	118	118		
Somewhat liberal	M (SD)	3.05 (0.78)	3.10 (0.73)	0.05	0.08
	N	156	156		
Moderate	M (SD)	2.88 (0.91)	3.01 (0.87)	0.13***	0.20
	N	373	373		
Somewhat conservative	M (SD)	2.46 (1.02)	2.69 (1.00)	0.23***	0.30
	N	223	223		
Very conservative	M (SD)	2.28 (1.09)	2.40 (1.18)	0.12	0.16
	N	146	146		

Note. Standard deviations (SDs) are reported in parenthesis with means.

Supplement Table 6. Pre/post difference in perceived harm to self by levels of health status.

		Pretest	Immediate Posttest	Pre-post Mean Difference	Cohen's d
Poor	M (SD)	2.39 (0.99)	2.74 (1.25)	0.35	0.39
	N	23	23		
Fair	M (SD)	2.79 (0.99)	2.97 (0.95)	0.17**	0.24
	N	179	179		
Good	M (SD)	2.74 (0.95)	2.91 (0.89)	0.17***	0.26
	N	314	314		
Very Good	M (SD)	2.82 (0.94)	2.92 (0.93)	0.10**	0.16
	N	368	368		
Excellent	M (SD)	2.76 (1.17)	2.81 (1.14)	0.05	0.06
	N	131	131		

Note. Standard deviations (SDs) are reported in parenthesis with means.

Supplement 7. Message Stimuli

Health Impact Essay Text

Extreme Heat

What is happening? Climate change is causing more very hot days, greater humidity, and longer, hotter, and more frequent heat waves.

How does that harm our health? Extreme heat can lead to heat-related illness and death from heat stroke and dehydration, and can make some chronic diseases worse.

Who is being harmed? Anyone can be harmed by extreme heat, but some people face greater risk. For example, outdoor workers, student athletes, city dwellers, and people who lack air conditioning (or who lose it during an extended power outage) face greater risk because they are more exposed to extreme heat. People with chronic conditions such as heart and lung diseases, and diabetes-related conditions are especially vulnerable to extreme heat. Young children, older adults, and people taking certain medications are also more vulnerable because they are less able to regulate their body temperature. Pregnant women are vulnerable too, as extreme heat can cause premature birth.

Poor Air Quality

What is happening? Climate change reduces air quality by increasing smog, wildfires, pollen, and mold.

How does that harm our health? Poor air quality increases asthma and allergy attacks, and can lead to other illnesses, hospitalizations, and deaths. For example, warmer and drier conditions lead to an increase in wildfires. Fire smoke, which can travel hundreds of miles downwind, exposes people to harmful pollutants, and increases emergency room visits, hospitalizations, and treatments for asthma, bronchitis, chest pain, and other heart and lung conditions. Warmer temperatures lead to a longer pollen season, and increased carbon dioxide in the air leads to higher pollen levels and more potent pollen. All of these factors make allergies and asthma worse, and more common. Higher humidity and flooding from heavy downpours can lead to dampness and growth of mold indoors, increasing lung infections and worsening asthma.

Who is being harmed? Anyone can be harmed by poor air quality, but people with asthma and other lung diseases are most vulnerable.

Extreme Weather Events

What is happening? Climate change is causing increases in the frequency and severity of some extreme weather events such as heavy downpours, floods, droughts, and major storms.

How does that harm our health? Extreme weather events can cause injury, displacement, and death. Extreme weather events can knock out power and phone lines, damage or destroy homes, reduce the availability of safe food and water, and damage roads and bridges, making it harder to get medical care and separating people from their medicines. Stomach and intestinal illnesses tend to increase following extreme weather and associated power outages. Mental health effects, such as

depression and post-traumatic stress disorder (PTSD) can also be caused or made worse by such events.

Who is being harmed? Anyone can be harmed by extreme weather events, but emergency evacuations pose extra health risks to older adults, the poor, and those with disabilities, if they are unable to access elevators and evacuation routes.

Diseases spread by insects, ticks, and rodents

What is happening? Climate change is causing increasing temperatures, too much rain in some places and too little in others, and severe weather events.

How does that harm our health? These changes can lead to an increase in the number and geographic location of disease-carrying mosquitoes, fleas, ticks, and rodents. For example, ticks that carry Lyme disease have become more numerous in many areas and have expanded their range northward. Mosquitoes that carry diseases like West Nile virus and Dengue fever thrive in conditions that are becoming more common, and there is concern that Malaria could re-emerge in the United States. Diseases not normally found in the United States, like Zika, can also emerge.

Who is being harmed? Anyone can be harmed by these diseases, but people who spend more time outdoors in places where these insects and other disease-carriers live are most vulnerable.

Contaminated water

What is happening? Climate change is causing higher water temperatures, heavier downpours, rising sea levels, and more flooding because of sea level rise and heavy downpours.

How does that harm our health? Each of these conditions can lead to water, fish and shellfish becoming contaminated by bacteria, viruses and parasites. For example, heavy rains can cause fertilizers and animal waste from farms to be flushed into rivers, lakes, and oceans. There, the fertilizer, waste, and warm water promote the growth of algae, viruses, parasites, and bacteria such as Salmonella and E coli. People who drink or swim in the contaminated water or eat contaminated fish and shellfish can become ill. This can cause diarrhea and vomiting, and in severe cases, paralysis, organ failure, and death.

Who is being harmed? Anyone can be harmed by contaminated water, but some people – especially children, the elderly, pregnant women, people with weakened immune systems, people in remote or low-income communities with inadequate water systems, and people in communities that are dependent on fish and shellfish – are at higher risk.

Contaminated food

What is happening? Climate change is causing increases in temperature, humidity, and extreme weather events like heavy downpours and flooding.

How does that harm our health? Each of these conditions can lead to food becoming contaminated by bacteria and toxins. For example, heavy downpours and flooding can spread fecal bacteria and viruses into fields where food is growing. Higher sea surface temperatures can lead to more bacteria and viruses, and greater accumulation of mercury and other heavy metals in seafood. Because pests,

parasites, and bacteria thrive in warmer weather, farmers are using more pesticides on crops and drugs in livestock, which can cause health problems. The geographic range of mold and associated toxins is also expanding, affecting corn, peanuts, cereal grains, and fruit.

Who is being harmed? Anyone can be harmed by contaminated food, but infants, young children, pregnant women, the elderly, the poor, agricultural workers, and those with weakened immune systems are most susceptible.

Hunger and malnutrition

What is happening? The level of carbon dioxide in our air is increasing, and the resulting climate change is causing increases in temperature, humidity, and extreme weather events like heavy downpours and flooding.

How does that harm our health? Rising levels of carbon dioxide in the air decreases the nutritional value of important food crops such as wheat, rice, barley, and potatoes. This happens because in the presence of more carbon dioxide, these plants produce less protein and more starch and sugar, and they take in fewer essential minerals. Higher temperatures can also result in more food spoiling. Extreme weather events can damage or destroy crops, and disrupt food production and distribution by knocking out power, damaging infrastructure, and delaying food shipments. As a result, food can be damaged, spoiled, or contaminated, reducing the availability of and access to safe and nutritious food.

Who is being harmed? Anyone can be harmed by lack of food or malnutrition, but infants, young children, pregnant women, the elderly, and the poor are particularly vulnerable.

Mental health problems

What is happening? Climate change is causing increases in the frequency and severity of some extreme weather events such as heavy downpours, floods, droughts, and major storms.

How does that harm our health? Many people exposed to the worst extreme weather events experience severe stress and serious mental health consequences including depression, anxiety, post-traumatic stress disorder (PTSD), and increases in suicidal thoughts and behavior. Such disasters can also cause increases in alcohol or drug abuse in an effort by some to cope with the stress following an extreme event.

Who is being harmed? Anyone's mental health can be harmed by a disaster, but people at higher risk include children, the elderly, pregnant and post-partum women, those with pre-existing mental illness, the poor, homeless, and first responders. Farmers and other people who rely on the natural environment for their livelihoods are also at higher risk.