Health and economic benefits are motivations for individual climate action

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Background

- Climate change is a major threat to human health
- Health in climate change communication can help motivate pro-climate behaviors
- Pro-climate behaviors include mitigation: actions that can reduce or stabilize greenhouse gas emissions, and adaptation: actions to adapt to a changing climate
- 92% of Americans are aware of global warming, but knowledge does not always lead to action

Objective

The objective of this study was to understand which pro-climate actions people engage in, who engages in the actions and why, and their perceptions of climate and health risk.

Methods

Survey Development

- Developed an online survey in Qualtrics
- Used questions from other climate change and health surveys
- Included attention checks
- For each activity, participants selected:
  - whether they were already doing,
  - wanted to in the next 6 months,
  - would in the future, or
  - were not interested in doing
- Among those who were doing an activity, we asked their motivation for engaging in the activity including:
  - to save money,
  - to promote health, or
  - because of environmental impacts

Participants & Setting

- July & August 2020 through Amazon's MTurk
- Adults, living in the United States
- Exempt from IRB review, de-identified data
- Anticipated enrollment of N=500

Data Analysis

- All analyses were performed using Stata 17
- Descriptive statistics for demographics
- Chi square tests to compare responses among engaging in different activities
- Logistic regression to assess engaging in an activity and demographics
- Calculated a "doing score" for the number of activities a participant engaged in
- ANOVA to understand their beliefs about when climate change will start to harm people's health

Results

Table 1. Summary of demographic information of those completing the online survey, July 14-August 14, 2020, N=504

Characteristics	n (%)
Age, mean (SD); range	41.6 (11.3); Range 24-76
Sex	
Male	250 (49.6%)
Female	249 (49.4%)
Neighborhood Type	
Urban	205 (40.5%
Town	227 (45.0%
Rural/Farm	70 (14.5%)
Total Household Income (in 1000s)	
<$30	114 (22.6%)
$30-99	314 (62.3%)
≥$100	76 (15.1%)
Education Level	
Some College or Less	156 (31.0%)
Associate/Bachelor or more	348 (69.0%)
Party Affiliation	
Democrat	241 (47.8%)
Independent	126 (25.0%)
Republican	124 (24.6%)

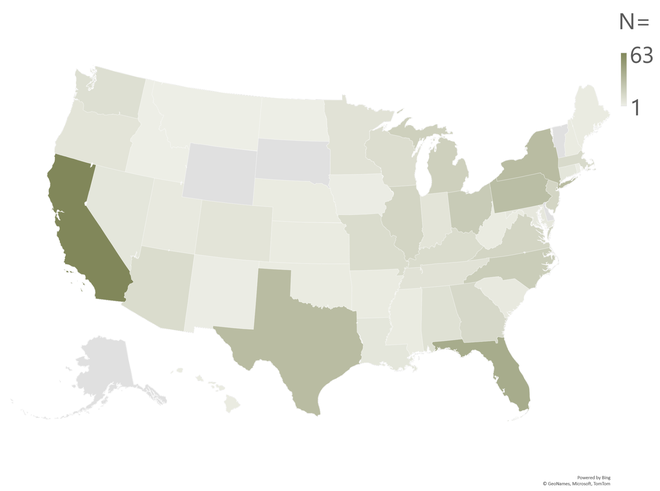
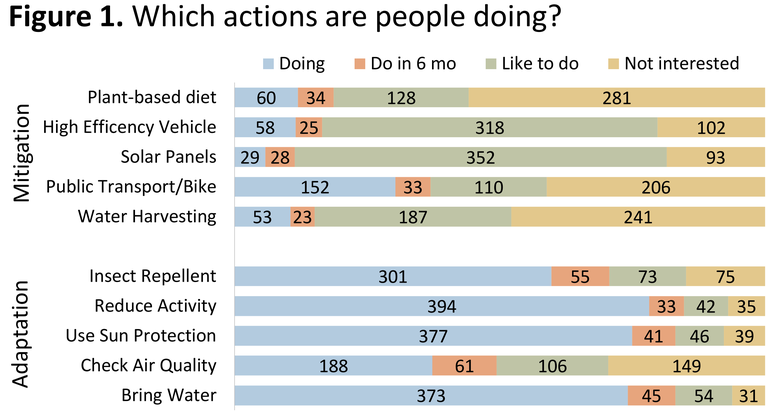


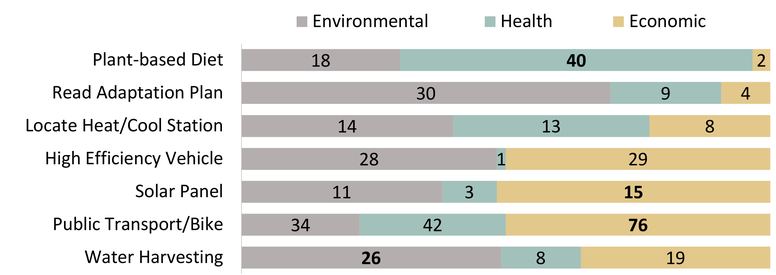
Figure 1. Which actions are people doing?



Key Findings

- Odds of using public transportation is 2.2 higher in urban areas (95% CI: 1.19, 4.14) than rural
- Odds of purchasing a high efficiency vehicle, bringing water on hikes or walks, wearing sunscreen, and checking air quality were higher in those reporting incomes $30-99K, or >=$100K
- Men reported checking air quality, reducing activity, and wearing sun protection less than women
- Odds of wearing sun protection is 2.4 higher in urban areas (95% CI: 1.30, 4.30) than rural

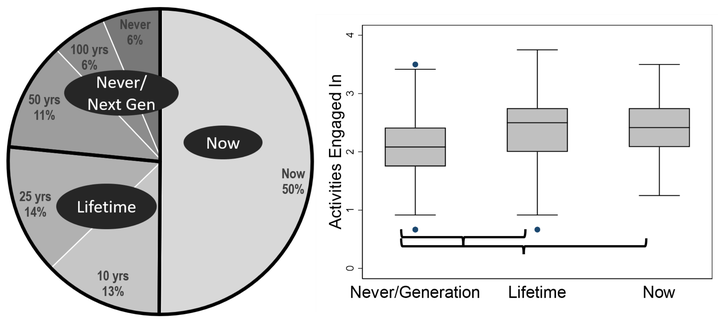
Figure 2. What is the primary motivation for engaging?



Key Findings

- Health is the primary motivation for switching to a plant-based diet
- Economics is the primary motivation for using public transport or installing solar paneling
- Environmental reasons are the primary motivation for water harvesting
- Converting to a high efficiency car evenly split between environmental and economic reasons

Figure 3. How do respondents perceive climate and heath risk, given their activities?



Key Findings

- Those who believe climate change is happening now or in their lifetime engage in more activities (F=16.69, p<0.001) than those who do not believe in climate change
- Those who believe climate change can be addressed engage in more activities (F=7.20, p<0.001)

Discussion & Conclusion

- Uptake of individual pro-climate action is high
- Need for improved and tailored communication about the benefits of individual pro-climate actions
- Motivating factors differ between individual actions. For example, framing a plant-based diet in terms of health co-benefits could be more motivating
- If the right incentives were in place, mitigation effects could be seen with those wanting to install solar panels and converting to a high efficiency vehicle
- Individual actions alone cannot mitigate climate change, but increasing changes to social and cultural norms through pro-climate actions can help
- Those with positive beliefs (humans can and will stop climate change) and those who believed humans could but are not willing or could but will not stop climate change were more engaged
- Framing and emotional content of motivational communications for climate change are important
- These results aid in the development of climate change communication strategies that could reach various audiences

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