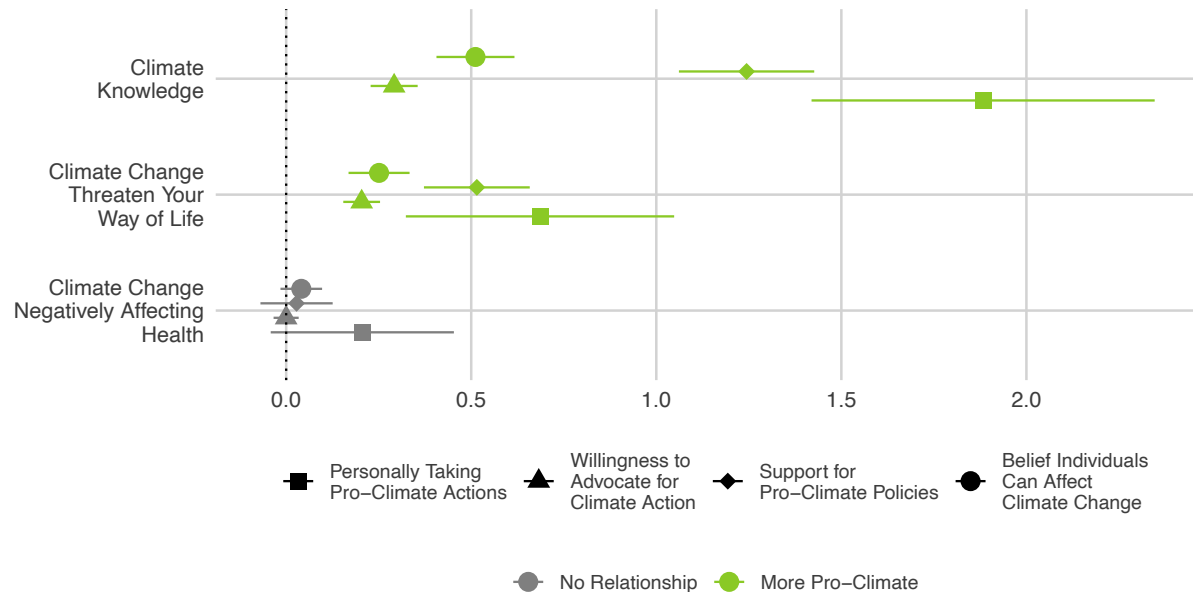


Knowledge as a Predictor of Pro-Climate Behaviors and Support for Pro-Climate Policies

(Under Review)

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Climate Knowledge More Strongly Associated with Pro-Climate Behaviors, Attitudes, and Policy Preferences than Worry about Climate Change



Abstract: In a political environment characterized by a contest over the nature, extent, effects, and responses to climate change, understanding the factors associated with acceptance of climate action is critical to designing effective climate change communication strategies. Drawing on responses from the November 2023 ASAPH Survey – a national probability sample of 1,538 of US adults – this study finds that climate knowledge predict respondents’ [a] support for policies included in the *Inflation Reduction Act*; [b] perceived personal agency in addressing climate change;

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[b] willingness to engage in climate change advocacy; and [d] personal pro-climate behaviors even after controlling for thinking climate change will threaten your way of life.

Predictors

To measure *climate knowledge* we asked whether:

1. Increases in the Earth's temperature over the last century are due more to the effects of pollution from human activities.
2. Human activities are significantly affecting the rate of climate change (CC).
3. There are more extreme weather events in the U.S. than 10 years ago.
4. Heat waves are becoming more frequent and intense than in the past.
5. The number of deaths from CC has increased in the U.S.
6. Those with low income face greater climate-related health risks than others.
7. Climate change is increasing the risk of heat-related illnesses, respiratory diseases, and insect-borne diseases in the U.S.
8. Climate change will increase the number of people affected by malaria, Lyme, West Nile, dengue, and Zika.
9. CC is negatively affecting mental health in the U.S.
10. CC is increasing the risk of water-borne diseases such as cholera and typhoid.
11. Increasing the amount of carbon in the atmosphere decreases the quantity and quality of fruits and vegetables grown in the U.S.
12. Pregnant people exposed to extreme heat are more likely to deliver their babies early.

These twelve items were scaled to create our *climate knowledge* variable.

To measure respondents' reported *worry about climate change* we asked: To what extent, if at all, do you think that climate change already poses or will pose a serious threat to you or your way of life in your lifetime? We also asked respondents whether climate change was negatively, positively, or not affecting their health or the health of their family. The two items were averaged together to create our measure of whether climate change is negatively affecting health.

Outcomes

To measure **support for pro-climate policies**, we asked respondents how much they favored:

1. Increased investment in energy-efficient public transit
2. Tax credits for rooftop solar or battery storage
3. Tax credits for electric cars
4. Forgivable loans for rural communities improving energy efficiency
5. Community grants to protect against impacts of climate change
6. Taxing corporations based on carbon emissions to reduce climate change

To measure **pro-climate actions** respondents reportedly had taken, we asked whether respondents had:

1. Purchased more energy efficient appliances
2. Reduced energy use at home
3. Reduced use of plastic
4. Installed a water purifier
5. Installed an air purifier
6. Increased consumption of plant-based food
7. Reduced travel by air
8. Increased use of public transit
9. Installed solar panels
10. Relied on an electric vehicle

For each of these sets of items, we created a single scale to represent respondents' views.

To measure respondents' **willingness to advocate**, we asked whether respondents were willing to contact a government official or sign a petition on behalf of climate action. We also measured individuals' perception of **agency** as whether they believed there are things that an individual can do to address climate change.

Summary

Climate knowledge significantly predicted each of these pro-Climate attitude and behavior scales to a greater extent than worry or trust in public climate-science institutions. Individuals who were more knowledgeable about climate change were more likely [1] to have reported taken pro-climate actions in their own lives; [2] to express support for pro-climate policies; [3] to believe they as an individual can do things to address climate change; and [4] to be willing to advocate on behalf of pro-climate action.

APPC's ASAPH Survey

The survey data come from the 17th wave of a nationally representative panel of 1,538 U.S. adults, first empaneled in April 2021, conducted for the Annenberg Public Policy Center by SSRS, an independent market research company. This wave of the Annenberg Science and Public Health Knowledge (ASAPH) survey was fielded November 14-20, 2023, and has a margin of sampling error (MOE) of ± 3.3 percentage points at the 95% confidence level.

More information about the ASAPH Climate Survey can be found in "[Experiencing severe weather predicts support for policies to mitigate effects of climate change.](#)"

The policy center has been tracking the American public's knowledge, beliefs, and behaviors regarding vaccination, Covid-19, flu, maternal health, climate change, and other consequential health issues through this survey panel for nearly three years. In addition to Jamieson, the APPC team behind this survey includes Patterson, who analyzed the data; Patrick E. Jamieson, director of the Annenberg Health and Risk Communication Institute, who developed the questions; and Ken Winneg, managing director of survey research, who supervised the fielding of the survey.

The Annenberg Public Policy Center was established in 1993 to educate the public and policy makers about communication's role in advancing public understanding of political, science, and health issues at the local, state, and federal levels.