

## **From Conversation to Action: Motivating Adolescents towards Climate Change Mitigation Behaviors**

**Valdez, Rene**, Kathryn Stevenson, and Nils Peterson

*NC State University*

Climate change is expected to have unprecedented global impacts, requiring collective action to mitigate effects and adapt to a changing world. Despite scientific consensus on the causes and impacts of climate change, public opinions remains polarized on what causes climate change and what should be done to address it. Climate communication efforts aim to address the mismatch between public opinion and scientific consensus, but psychological and ideological barriers prevent some adults from incorporating climate change information in productive ways. Adolescents may represent a vital audience for climate change communication because they appear to bring less ideological bias to their assessments of climate change information and they are the future decision-makers who will live with the major impacts of climate change. Multiple strategies have been identified for motivating climate change behaviors among adolescents, including building knowledge, increasing risk perception, and fostering hope. Another promising but understudied area is the importance of trusted messengers in motivating behavior.

We begin to address this need by examining how friends, family, and teachers influenced climate change behaviors of 1,472 middle-schoolers across the state of North Carolina (NC). We also considered how climate change knowledge, concern, gender, and socioeconomic status predicted behavior. We randomly selected middle school science classrooms across NC and measured changes in climate change knowledge, concern, communication patterns, and behaviors with pre- and post-surveys. We measured climate change knowledge with true/false items addressing climate change science, causes, and impacts. We measured climate change concern and behavior with multi-question Likert scales asking respondents how concerned they were about climate change in general and its impacts to themselves, the US, and future generations, and what environmentally-friendly activities they engage in. Similarly, we measured communication with friends, family and teachers by asking respondents the frequency of conversations with each of these groups. We used structural equation modeling to evaluate how increased climate change knowledge, concern, communication with friends and family, and more in-class discussions predicted climate change behaviors. We found that increased knowledge predicted increased concern, and that increased concern, discussion (with friends, family, and in class), and locale (urban students) were positively related to climate change behavior.

Knowledge, concern and social influences from trusted messengers were significant drivers of behavior. Increased knowledge did not translate directly to behavioral changes, rather our results suggest that the impacts of knowledge were mediated by concern. These results suggest the importance of communicating climate change science, causes, and impacts, but also diffusing climate change messages through social networks and incorporating emotional and social appeals that link behaviors with social norms. We recommend that climate change messaging to adolescents incorporates emotional appeals and acknowledges the social role of engagement to more effectively motivate behavior changes.