Climate Change Indicators Predict Sexual Violence Across Countries • Climate Privilege: Defensive Disbelief in Climate Change Science • The Impact of Cultural Values on the Effectiveness of Climate Change Interventions • Adaptive Aspects of Negative Psychological Reactions with Regard to Proactive Behavioral Intentions Towards Climate Change in Japan

Poster sessions at the APS Annual Conventions give students and researchers the opportunity to network while they present their work to other psychological scientists from across the globe. For this issue, we asked four researchers who recently presented posters, three at the 2023 APS Annual Convention in Washington D.C. and one at the 2023 International Convention of Psychological Science (ICPS) in Brussels, Belgium, to share their research related to behavior and climate.

Check out news and coverage from the 2023 APS Annual Convention in Washington, D.C.

Climate Change Indicators Predict Sexual Violence Across Countries
What did the research reveal that you didn’t already know?

It is well documented that climate change and the associated increase in natural disasters have resulted in a myriad of humanitarian crises worldwide. Additionally, there are well-established links between criminal behavior (including sexual offenses) and weather and climate change. An increase in temperature has long been associated with human violence. For example, a 1°C increase in temperature, with additional increases in humidity and haze, is linked to increased assaults. However, prior research has not examined the relationship between specific climate-change indicators, sexual violence, and rape. Our research filled this gap.

We expected a broad range of climate-change indicators to be associated with higher rates of rape and other forms of sexual violence. Climate-change indicators explained 32% of the variance in rape rates across countries, with the best predictors of rape prevalence being poor air quality and greenhouse-gas emissions per capita. The indicators also explained 34% of the variance in sexual violence in general, with the best predictors being poor air quality, greenhouse-gas emissions per capita, and CO₂ growth rate.

What is the relevance of your findings for the future of behavior and climate research and psychological science as a whole?

Two aspects of this research are particularly relevant for future behavior and climate research. First, prior research has shown that climate disasters worsen the male abuse of women (rape in our study was defined as sexual violence against women). Given that climate-change indicators (e.g., poor air quality, greenhouse-gas emissions) explained 32% of the variance in rape rate across countries, understanding why those climate-change indicators were correlated with higher levels of rape against women could bolster efforts to proactively address those specific climate-change indicators and reduce climate-disaster-induced violence against women.

Second, climate-change indicators that include multiple weather elements—not just temperature—are meaningful in understanding how climate change will impact sexual violence. An understanding of the more nuanced and specific variables leading to sexual violence and rape is critical to addressing the impacts of climate change.

What are your next steps with regard to this research?

Given the warming of the planet and increased incidence of natural disasters, it is important that research is conducted to help us understand the varied contributions of climate-change indicators on all humanitarian crises. It would also be helpful to further understand the variables that mediate the interaction between specific climate-change indicators and sexual violence.

Reference
Climate Privilege: Defensive Disbelief in Climate Change Science

APS 2023

Jasmine Edun, Faith Cabral, Anna Lloyd, Nicholas Mehiel, Ayanna Millett, and Geoffrey D. Munro (Towson University)

What did the research reveal that you didn’t already know?

People are biased when processing climate-science information, particularly if it challenges their other critical beliefs. Climate-science information can trigger anger and defensive behaviors in some. Our study investigated climate privilege as a form of motivated reasoning that contributes to resistance to climate-science information. We found that U.S. college students responded defensively to information about the privilege of living in the United States (increased resource consumption and fewer climate consequences than in most other countries). For example, Republicans and independents (but not Democrats) in the climate-privilege group reported more disbelief in climate science compared with a climate-change group that simply learned information about the effects of climate change without mention of U.S. privilege.

What is the relevance of your findings for the future of behavior and climate research and psychological science as a whole?

The defensive reaction exhibited by the participants in our research results in a poorer understanding of climate change and little or no motivation to behave in more environmentally sustainable ways. By understanding how people think and feel about climate change and their role in contributing to it, we can develop targeted messages (i.e., messages focused on the injustice of climate change for left-leaning individuals and messages focused on economic competitiveness for right-leaning individuals) that could ultimately break through the defensive resistance and more effectively persuade people to take action.

What are your next steps with regard to this research?

We have several studies planned to further explore the concept of climate privilege. We plan to obtain a broader sample of U.S. citizens (not just college students) with a wider age range and greater geographic diversity to test the consistency of the findings. We also plan to focus on the underlying causes of the emotional reactions, with the ultimate goal of testing different communication methods to more effectively produce long-lasting, environmentally friendly behavior across the political spectrum.
The Impact of Cultural Values on the Effectiveness of Climate Change Interventions

APS 2023

Danielle Goldwert, Kimberly Doell, Jay J. Van Bavel, and Madalina Vlasceanu (New York University), and Samantha Grayson (Stanford University)

What did the research reveal that you didn’t already know?

This research project revealed several insights. Though the cultural dimension of individualism/collectivism is known to affect climate-related attitudes and behaviors, we found that the specific interventions that stimulate climate belief and action differ between individualistic and collectivistic cultures. We found that reducing psychological distance was the most effective intervention to promote belief in climate change in individualistic countries, whereas a future self-continuity intervention was most effective in collectivistic countries.

Further, a negative-emotions intervention proved most effective in collectivistic cultures for promoting sharing of climate information. Finally, we found large discrepancies in a tree-planting behavioral task. Binding moral foundations, scientific consensus, and dynamic social-norms interventions were effective in individualistic countries, but none of the 11 interventions tested significantly impacted tree-planting behaviors in collectivistic countries.

What is the relevance of your findings for the future of behavior and climate research and psychological science as a whole?

Our findings underscore the importance of cultural factors in shaping people’s attitudes and actions toward climate change. They emphasize the need to tailor communication strategies to cultural values and priorities when advocating for climate action and policy change. In addition, our research challenges the field’s overreliance on WEIRD (Western, educated, industrialized, rich, and democratic) samples by providing insights from a diverse range of countries and their unique cultural contexts. This paves the way for a more inclusive and nuanced approach to psychological research.

What are your next steps with regard to this research?

A potential next step is to identify and promote alternative proenvironmental behaviors in collectivistic cultures, especially ones that might foster group actions. Regarding our Many Labs project overall, the research team will soon make the dataset publicly available, allowing other researchers to test various hypotheses and build upon our findings.

Read all of the articles from the September/October Observer.
What did the research reveal that you didn’t already know?

We have been experiencing increasing incidences of extreme weather, such as torrential rain leading to flooding. Our perceptions of extreme weather are known to cause psychological reactions including changes in risk perception and climate anxiety. In this study, we focused on nonclinical levels of anxiety regarding climate change. Anxiety is often regarded as something to be alleviated. However, we thought that nonclinical climate anxiety could be adaptive if it is associated with proactive behavior (e.g., purchasing disaster insurance to prepare for future potential damage). The result of our study indicated that this was true. However, the absence of worry, which is often regarded as a desirable psychological state, was not associated with proactive behavior.

What is the relevance of your findings for the future of behavior and climate research and psychological science as a whole?

Nonclinical levels of climate anxiety was positively associated with preparative behavior. Therefore, our research indicates that it could be useful to feel something negative when it helps you cope with the problem (e.g., climate change).

What are your next steps with regard to this research?

It is important to find more effective methods to promote proactive behavior. We are currently examining the individual traits associated with adaptive and maladaptive types of anxiety. We are also examining effective and efficient ways to communicate knowledge regarding climate change so that people can adequately perceive risk for adaptive anxiety.

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