

Heat Exposure And Temperature Equity (HEATE): Characterizing indoor heat stress in housing in NYC

Robbie M. Parks, Ava Chow, Carina Yiu, Zhiyu (Audrey) Wei, Jordyn Pykon, Janna Zilkha, Maren Hale, Yoshira Ornelas Van Horne

21st February 2024

Email: robbie.parks@columbia.edu

Twitter/X: [@rmiparks](https://twitter.com/rmiparks)

Website: sparklabnyc.github.io



MAILMAN SCHOOL
OF PUBLIC HEALTH



Triple-Digit Temperatures Break Records in the Northeast

Daily record highs were set in cities along the East Coast, including Boston and Newark, which was on its fifth day of triple-digit temperatures.

 Share full article    207



Tony Lopez at East River Park in New York on Sunday. Temperatures were expected to exceed New York's previous July 24 record of 97 degrees, which was set in 2010, forecasters said. Gabby Jones for The New York Times

By **Vimal Patel**

July 24, 2022

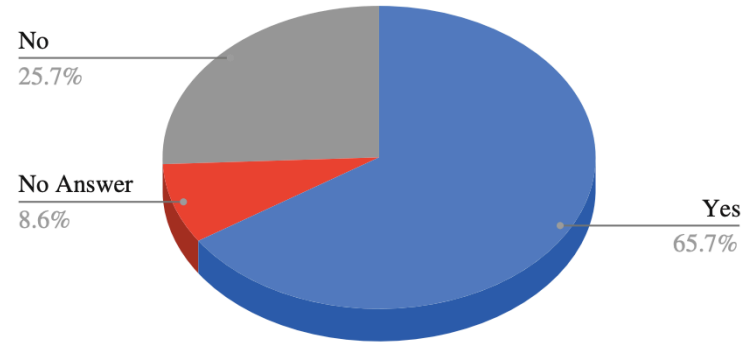
New Yorkers Sweat It Out During Post-Labor Day Heat Wave

From the city's public pools to the U.S. Open, New Yorkers experienced unusually high temperatures for early September, and some places in the surrounding area broke heat records.

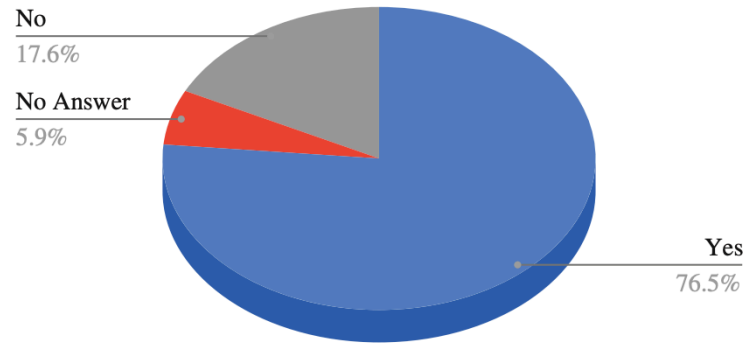
 Share full article    23



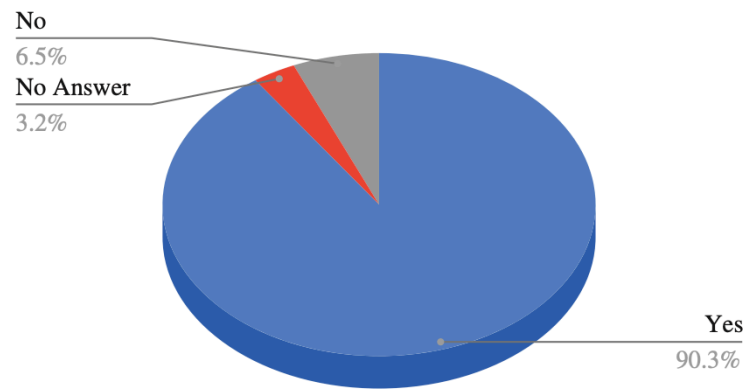
Temperatures above 90 degrees are unusual in New York City after Labor Day, according to meteorologists. Jordan Macy for The New York Times



(a) AC Prevalence Among Black Respondents



(b) AC Prevalence Among Latino/a/x, Spanish or Hispanic Respondents



(c) AC Prevalence Among White Respondents

Figure 10. AC Prevalence by Race

Background

- Cooling hardship, determined by access to and ability to pay for cooling mechanisms at home, is an increasing problem in the United States.
- Low-income, older adults, and minoritized groups disproportionately experience cooling hardships.
- New York City has not yet codified maximal indoor temperatures during heat season into law.
- This leaves an important and highly relevant environmental health gap with direct relevance to climate and housing justice.

1. Collect temperature and humidity data within apartments throughout Northern Manhattan and South Bronx during 2024.
2. Assess trends and relationships with demographic factors, neighborhood characteristics, and building data.
3. Compare indoor temperature information with ambient outdoor air temperature during extreme heat events.

Heat Exposure And Temperature Equity (HEATE): Characterizing indoor heat stress in social housing in NYC



PARTICIPANTS NEEDED

Is your home too **cold** in the winter? Or too **hot** in the summer?

HEATE

We will install two small temperature sensors in your home until end of Summer 2024.

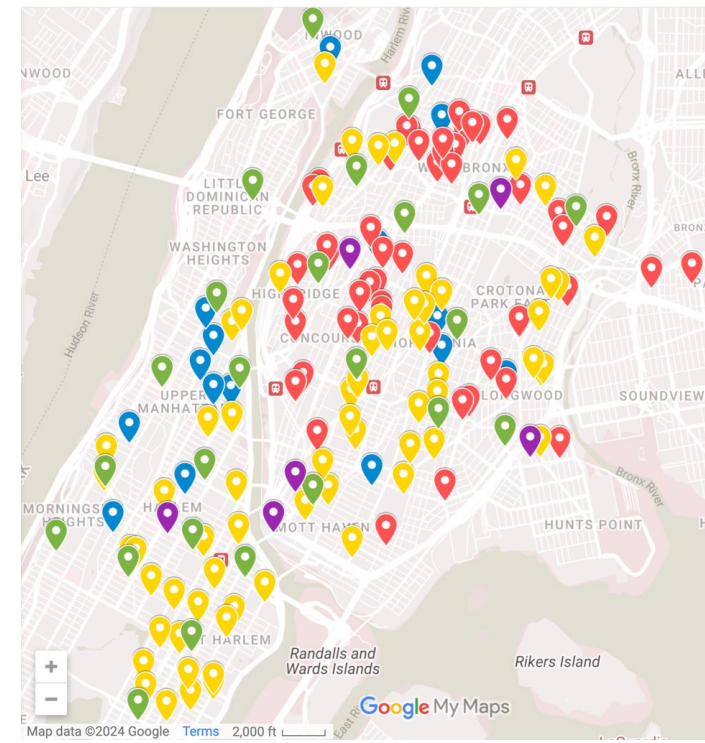
RECEIVE A \$50 VISA GIFT CARD*

Our team at **Columbia University Mailman School of Public Health** is looking for NYC residents to participate in a study investigating indoor temperatures

Interested? Fill out our form using the QR code

Questions? Contact Robbie Parks
robbie.parks@columbia.edu

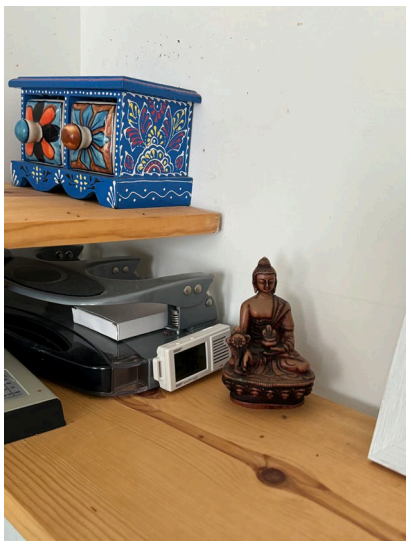
* Per household. Compensation given as two \$25 Visa gift cards. One at installation, one at pickup.



Heat Exposure And Temperature Equity (HEATE): Characterizing indoor heat stress in social housing in NYC



Heat Exposure And Temperature Equity (HEATE): Characterizing indoor heat stress in social housing in NYC



Questions

- Challenges faced while installing?
- Differences in strategy for short- to long-term installs?
- Incentivizing participants?
- Optimal reporting for participants?
- Concerns from participants regarding privacy or data security when installing sensors in their homes?
- Optimal reporting for policy?
- How participants can get more involved in the science?
- How participants can use the data?
- Sensor placement for accurate temperature readings?
- Ensuring consistent connectivity and data transmission from the sensors?
- Environmental factors that affect sensor performance, such as drafts, sunlight exposure, or proximity to electronic devices?

Heat Exposure And Temperature Equity (HEATE): Characterizing indoor heat stress in housing in NYC

Robbie M. Parks, Ava Chow, Carina Yiu, Zhiyu (Audrey) Wei, Jordyn Pykon, Janna Zilkha, Maren Hale, Yoshira Ornelas Van Horne

21st February 2024

Email: robbie.parks@columbia.edu

Twitter/X: [@rmiparks](https://twitter.com/rmiparks)

Website: sparklabnyc.github.io



MAILMAN SCHOOL
OF PUBLIC HEALTH

